

WHY KILL FOR FOOD

ROJA. MUTHIAH
ARTIST
KOTTAIYUR P. O.
RAMNAD DIST.

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WHY KILL FOR FOOD ?

By

GEOFFREY L. RUDD

*The Vegetarian Society Wilmslow, Cheshire
(ENGLAND)*

(With Permission)

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FOREWORD

At the request of some interested Humanitarians in India the publisher took permission of the Vegetarian Congress and a limited number of copies are being printed this time of this book 'WHY KILL FOR FOOD' originally written by the Hony. General Secretary of the International Vegetarian Congress, Mr. Geoffrey L. Rudd. The author was generous enough to accord permission to publish this book in its complete form, in cheap Indian Edition, as it would be very costly to import these books from England.

A thorough study of this book by any non-vegetarian will undoubtedly convince him of the many arguments which he would like to put forward substantiating his statement that MEAT-EATING is far beneficial than Vegetarian Diet, is nonetheless exaggerating. Comparative datas are printed in the end of this book, which will guide the reader in proportionating his diet on Vegetarian line equal to that of Non-vegetarian diet.

The simple Logic put forward by the author that it is not necessary to KILL FOR FOOD is very interesting. In order to facilitate the common man this book has been priced as low as Rs. 2.50 nP. only and it is highly recommended that every family, whether non-vegetarian or vegetarian, should add a copy of this invaluable book to their home library.

With the permission of the Council

JOHN SUBRAMANIAM, B.SC. (TECH.),

Secretary, National Headquarters.

Note.—The publisher thanks gratefully all the benefactors who willingly contributed in advancing certain amounts for the publication of same.

Each Rs. 2.50 nP.

WHY KILL FOR FOOD ?

Presents all the major arguments in favour of vegetarianism and the evidence against flesh-eating. It deals with everything from physiology and digestive processes to ethical principles and the purpose of life. It includes sections on health at all ages and there are chapters on orthodox medical practice, food production and adulteration from the reformer's point of view. It gives the latest information on scientific nutrition with the sources and properties of essential proteins, carbohydrates, fats, minerals and vitamins. The student of would-be lecturer will find all the facts and figures for presenting the case for vegetarianism or defending it in debate—from world economics to the relative cost of food. The endeavour is to show that vegetarianism is not a fad but a fundamental necessity for an enlightened way of life.

Published in India by :—

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PREFACE

The need for reasoning and a philosophy of life.

THOUGHT processes, and particularly the lack of them, are a bigger factor in our lives than we realize. Having graduated through the tedious years of formal education, most of which is a waste of time, we tend to go through life without doing any real thinking. The process which passes for thinking is the choice between what we imagine are pleasant and unpleasant feelings. Choices in behaviour are usually made between easy and difficult course of action and, like water, we are apt to follow the line of least resistance, though this course is not necessarily the best for the individual or the community.

It is lack of reasoning, of discernment and discrimination, as the Buddhists say, which bar our way to a fuller life and keener appreciation.

At the end of the scale we have death, with no thinking processes as far as this world is concerned. Complete lack of thinking is death or unconsciousness. It follows, therefore, the more thinking we do the less we can be said to be dead. Since we have the gift of consciousness the best use of time is to live as vitally as possible and be fully aware of such truth and beauty as is available to our limited powers of perception.

If we think life has no purpose, no plan, that the universe is a series of accidental phenomena with no laws governing action and reaction, no cause and no effect; in fact, a great chaos without rhyme or reason springing into existence by the accidental combination of already existent chemicals, then our immediate behaviour does not matter. We need have no

care for the past, present or future ; no morals and we need assume no responsibility for our behaviour. There is no conceivable reason why we should not remain as, and act like, beasts. If everything about us is unpremeditated chaos stumbling from one unpredictable experience to another, then we ourselves are part of it. We have no purpose ; this brief flicker of pleasant and unpleasant sensations is a pointless waste of time and one in which we may or may not achieve complete annihilation at any moment.

It is no coincidence that irresponsible behaviour, like that of gangsters, cosh boys and warmongers, spivs and business sharks, is found in that strata of society which gives little thought to philosophy and the deeper issues of life. When life has no purpose, chaos is the harvest even in the individual life. How greater then the chaos if the whole universe is accidental.

Those destitute of philosophy, according to Plato, may be compared to prisoners in a cave knowing only the shadows they themselves cast upon the walls. Never having been in the real world, they accept their own shadows for reality, and can indeed, know no other unless they are willing to listen to the visionaries who have been beyond the cave.

In a sense we are prisoners locked in a material world and chained for a time in a physical vehicle or cave. The shadows on our walls, which we accept for reality, are the conventional thoughts and prejudices we have accepted from childhood and the things we see. The danger lies in accepting for truth the things, or shadows, we and other people create and cherish in our minds. Reason must be permitted to sift facts and feelings. Anything which flouts reason must be suspect for it is not good to cling to old, though comfortable, ideas, if they do not fit the evidence before our eyes and more particularly our sense of right and wrong, good and bad, which is the measure of our progress from barbarism.

Not many of us subscribe to the idea that all we can see in this vast solar system and universe is the result of chance and chaos. We think life has a reason and that we can see order and balance ; know something of the “ natural laws ” governing all phenomena and even discern a rising scale of consciousness and awareness from the atom, which makes responses to certain kinds of stimuli and can, therefore, be said to have a kind of intelligence ; through more and more sensitive forms of existence up to the great spiritual and intellectual leaders of mankind — a wonderful pattern of progressive growth, both in physical structure and spiritual development.

We begin to realize that our behaviour and reaction to circumstances matter a very great deal, because whatever we do must affect other people as well as ourselves — we see that we are part of the overall pattern and this realization is the dawn of moral responsibility — distinguishing us somewhat from other creatures which appear to live without moral considerations.

If we can agree that there are Natural Laws ; that all effects have causes, then we also see that behaviour and the future are under our own control — especially collectively — for even though we ourselves may try to live on a high level, we still suffer through the actions of those who do not. However, the action is reciprocal and if a part of humanity is improved, then the whole is improved.

Just as we have to contend with circumstances conditioned by our predecessors, so will our successors be held or liberated by the pattern we create — again a moral responsibility to leave the world a better place than when we entered it.

In the following chapters an endeavour is made to show that vegetarianism is not merely a diet, or a way of achieving better health, but a necessary basis for any useful philosophy of life ; one influencing behaviour to an extent hitherto unrecognised. It is hoped to show that there is a vegetarian way

of looking at life, coloured by the thought that is better to live without causing unnecessary hurt to other living things. An effort is made to show that the fundamental basis of vegetarianism (i.e., ethical principle) exerts a definite influence on seemingly remote aspects of life and thinking, giving rise to a definite "Vegetarian way of life."

GEOFFREY L. RUDD

Wilmslow, Cheshire.

1956.

CHAPTER I

HISTORY OF VEGETARIANISM

The history of Vegetarianism : Evolution in early times. Definition of the word "vegetarian." Prehistorical indications up to sixth century B.C. Development of modern movement and founding of National Societies.

SINCE only a proportion of life is predatory and carnivorous in its method of obtaining nutrition, it follows that the practice of vegetarianism is as old as life itself and there is no necessity for the anthropological assumption that we may have evolved through flesh-eating animals. To the contrary, there are separate and distinct branches of evolutionary development.

Every evidence points to the fact that human beings, the terminal form of the *hominoidea*, are naturally frugivorous and that it is only in comparatively recent times, in the millions of years of planetary evolution, that *homo sapiens* was diverted during the ice ages from the dietary way of life for which he is anatomically equipped.

It is much more likely, if a spiritual source of motive power is ascribed to the universe, that parasites and cannibals are the result of degeneration and are the end-products of devolution through the operation of free will or physical cataclysms. Indeed a little thought on the idea of Divinely created life leads to the conclusion that life as we find it today has wandered a long way from its appointed path. However, the term "Vegetarian" is relatively new and was coined in England in 1842 from the Latin "vegetus" (whole, sound, fresh, lively), as a more pleasing and descriptive label than "non-meateater." The meaning given was "one who abstains

from the use as food of flesh, fish and fowl with or without the addition of eggs and dairy produce." The terms "lacto-vegetarian" and "vegan" are therefore superfluous so far as the dictionary meaning is concerned, though they are symptomatic of the inadequacy of the word. "Vegetarian" still leaves much to be desired for it gives the impression that vegetables are the only items of diet, whereas there is an almost inexhaustible range of foodstuffs — roots, herbs, leafy vegetables, legumes, grains, seeds, fresh and dried fruits, berries and nuts, together with eggs and dairy produce. These give a menu infinitely more attractive and varied than the average meateater's fare, which is a monotonous routine of a few species of domesticated animals, decaying fish, with defeathered and disembowelled birds as a luxury item at the time of Christmas — paradoxically in celebration of the birth of the Son of God.

Historical vegetarianism, so far as written records are concerned, goes back into the obscurity of time, and some of the world's most brilliant intellectual giants and reformers have advocated a fleshless diet as a matter of principle.

In the root-religions, from which most others have borrowed and modified, the unity and sacredness of life have been an essential part with the natural corollary of vegetarianism.

The priests of ancient Egypt were, according to Clement of Alexandria, forbidden flesh foods. Brahminism, Jainism and Zoroastrianism, which have no dated origin, have the same concept. Buddhism, founded in the sixth century B.C. with its main basis of harmlessness to all living beings, has 400 million adherents, many of whom are strict vegetarians, especially the priests. This ethical-philosophy was not a new cult but a revolt from the sacerdotal practices of a degenerate Brahminism, which in those times had fallen away from its original simplicity. Buddhism became a practical exposition

of the Brahminical postulate of a divine Godhead—Brahma—the single Divine source of life.

In the Western world the first definitely vegetarian community consisted of the followers of Pythagoras, who gave an unsurpassed lustre to Greece of the sixth century B.C.

Howard Williams' scholarly survey of "vegetarian" literature, *The Ethics of Diet* (long out of print), traced an appreciation of a meatless diet back to the eighth century B.C. and the early Orphic Societies. He also found a preference for a purer diet in the Hesiodic poems. In a footnote to his chapter on Pythagoras he wrote "Among the adherents of early Pythagoreanism are to be found some of the most intellectual as well as most virtuous of the old Hellenic philosophers, savants and moralists. It is possible here merely to name so distinguished intellects as Archytas, perhaps the most eminent scientific genius and inventor in the Hellenic world; and Epicharmos, the great composer of didactic comedy."

Empedokles in the fifth century B.C. continued the Pythagorean tradition and was considered as semi-divine in his own lifetime for his scientific medicine which, incidentally, did not include drugs and vaccines; he left no doubt about his opinion of flesh foods. "Will you not put an end to this accursed slaughter? Will you not see that you are destroying yourselves in blind ignorance of soul?"

Platonism may also be considered a continuation of the philosophy of Pythagoras, and Plato was insistent upon his dietetic principles.

Asoka, the third century B.C. vegetarian Indian Emperor and exponent of Buddhism, called the third Buddhist Council at which 1,000 followers fixed the sacred canon. He issued edicts and established medical facilities throughout his kingdom for both men and animals.

Up to the time of Christ, outstanding religious bodies and communities, like the Essenes, practised an ascetic life and

eschewed flesh foods. Hermes Trismegistus, Plotinus, Apollonius, Porphyry, Seneca, Ovid, Diogenes, Socrates, Plutarch and many others might be added to the list of distinguished vegetarians. (See Appendices.)

Christianity is a special problem in connection with vegetarianism, for the New Testament depicts Christ as a fish and meateater. We have devoted special chapters to this problem, but it is interesting to note here that many early Christian Fathers, like Origen, Tertullian, John Chrysostom, and Clement of Alexandria were vegetarians. So were the early Christian "Saints," in Britain, who were later ousted by the Roman version of Christianity. Roman soldiers lived almost entirely on grains and vegetables and our other ancestors, apart from the luxury classes were almost vegetarian — it is from these people that most of us have inherited the sturdy stock now being dissipated by blind unreasoning habits of eating. The further we get back to the Master the more evidence we find for vegetarianism. Doubtless the "Dead Sea Scrolls" will shed further light on this matter.

Coming to more recent times our personalities include Milton, Pope, Shelley, Rousseau, Thoreau, Voltaire, Gleizes, Sir Isaac Newton and George Bernard Shaw. All these people have shown that flesh foods are not necessary for advanced thinking processes — vegetarian athletes, ranging from Greek Marathon runners to modern swimmers, weight-lifters, wrestlers and long distance runners and cyclists, have demonstrated that the peak of physical fitness can be achieved without slaughterhouse products. (See Appendices.)

There is a letter extant from Sir Richard Phillips, High Sheriff of Middlesex, written in 1837, in which he testifies to 57 years of abstention from flesh food and this takes us back to 1780.

Shortly after the introduction of the term "vegetarian" in 1842 the first secular organisation devoted entirely to an

advocacy of a fleshless diet was founded in Manchester in 1847 and was called "The Vegetarian Society."

Credit for the founding of the Parent Society must go to members of the Bible Christian Church, Salford, founded in 1809 by the Rev. William Cowherd. This young Anglican clergyman was convinced that a complete abstinence from flesh foods was essential for spiritual attainment and his congregation pledged themselves to be vegetarian. In 1817 forty-one members of the Bible Christian Church, under the leadership of the Rev. William Metcalfe, emigrated and established a similar Church in Philadelphia, U.S.A. Foremost among the outstanding body of people who supported Mr. Cowherd was Mr. Joseph Brotherton, a Member of Parliament, and he wrote the first vegetarian tract to be printed in England in 1820.

Visitors to this country are sometimes puzzled by the fact that there are two "National" societies in England — at Manchester and London. In 1885 The Vegetarian Society purchased the goodwill of The National Food Reform Society and established a London Auxiliary. This branch grew until 1888, when it claimed its independence and became The London Vegetarian Society. Whatever difficulties were experienced in those days, the closest harmony and co-operation exists today.

The Vegetarian Society has about forty-five Affiliated Societies in the British Isles. Scotland, Wales, and Eire have their main national societies. The International Vegetarian Union sprang from the movement in Britain and was formed in 1908 following a suggestion by Dr. Anjou, of Nice, at the Diamond Jubilee meetings of The Vegetarian Society. Its first International Congress was held in Nice in 1908 and was convened by The Vegetarian Society, the seconded in 1909 being in Manchester, the centenary year of The Bible Christian Church. Following a break caused by the Second World War an International Congress was held at Wycliffe College, Glou-

cestershire in 1947 and this coincided with The Vegetarian Society's centenary.

Until 1950 all the I.V.U. work was done by honorary officials, but through the generosity of Mrs. Clarence Gasque, of California, permanent headquarters were established in London with a paid full-time Secretary, and the international movement now has affiliated centres in nearly every country—Africa, Argentine, Australia, Canada, Denmark, Eire, Finland, France, Germany, Great Britain, Holland, India, Israel, Ireland, Italy, Luxembourg, Malaya, New Zealand, Norway, Sweden, Switzerland, and United States of America, with points of contact in many others.

Mr. James Hough, in *The Vegetarian Movement in Britain* (World Forum Vol. ix, No. 2, 1955), stated "The success of the National Societies' work is only partly shown by the number of the members. A truer indication of progress is to be seen when we compare the reception given to their advocates by the public at the beginning with that given today. One hundred years ago the organised advocacy of vegetarianism was confined to The Vegetarian Society and two small churches — one in England and the other in America — now vigorous societies for vegetarian propaganda are to be found throughout the old and the new world."

The reluctance of the British Broadcasting Corporation to allow vegetarianism to be mentioned has now been overcome and the writer had the privilege of making the first real statement of vegetarian principles in March, 1956. (See Chapter XIII.)

The British movement has three magazines, *The Vegetarian*, official bi-monthly of The Vegetarian Society, *The Vegetarian News*, The London Vegetarian Society's quarterly; and *World Forum*, an independent quarterly formed and edited by the author since 1947. Many other countries produce vegetarian journals.

CHAPTER II

PHYSIOLOGY

Physiological arguments: Swanscombe skull evidence of finer types before Neanderthal man. Anatomical differences between flesheating and vegetarian animals.

IN his *History of the Primates*, Professor le Gros Clark, F.R.S. opens with this statement: "In his bodily structure Man shows such remarkable resemblances to the lower animals that it now seems astonishing to us that his kinship with them should ever have been seriously controverted. His skull and skeleton are composed of the same bony elements, his muscular system is made up of identical muscles disposed in the same general pattern, his heart and blood-vessels are constructed on exactly the same plan, and even his brain (though more elaborate) is made of the same basic elements. Anatomically, therefore, Man is simply one of the animals."

Darwin and other biologists have charted the broad evolutionary paths of the many thousand creatures inhabiting the earth and have drawn reasonable hypotheses from the assembled data. From a study of fossils, skeletal remains and living animals, it has been possible to assume a steady trend of evolution from simple cell-like organisms through the Palaeozoic, Mesozoic and Tertiary ages, to the present time with its highly developed representatives of the *hominioidea* and its sub-species *homo sapiens*, with its spiritual and mental giants like Buddha, Pythagoras, Plato, Gandhi and Bernard Shaw.

It is a fundamental implication of the evolutionary hypothesis that the close resemblances in anatomical structure

indicate a relationship going back to the very beginnings of time, perhaps over 500,000,000 years to the Archaean era.

Adaptations to environment, the survival of those best fitted to meet contemporary conditions, gradual genetic mutations and anatomical changes necessary in the struggle for existence (like the well developed forearms of monkeys and the horse changing to a one toed ungulate, though vestiges of other toes still remain), may have played their parts in preparing the terminal forms of creatures as we know them today, although there is no valid reason for supposing that we have reached the goal of physical evolution. If we had already done so we might well conclude that the experiment has been a failure.

Anthropologists have, unfortunately, drawn a picture for us of the Neanderthal man, and his predecessors, with ape-like stance and beetling brows. The implication being that *homo sapiens* has evolved through such creatures. This is not necessarily so, for we have similar types with us today, who may well be degenerate end-products of particular branches of evolution and the recent finding of the Swanscombe man skull fragments suggests that human beings more akin to ourselves lived ages before the Neanderthal race—a fragmentary proof that there may well have been a “Golden Age” obliterated by one of the many geological or interplanetary upsets which have undoubtedly devastated this world from time to time.

Because remains of more advanced and sensitive human beings have not yet been found, in the same geological strata as the remains of primitive races, is not proof that they did not exist and the most amazing evidence, that of comparative anatomy, which is conveniently ignored by the meat-eating community, is that we have the physiological equipment of vegetarians (frugivores to be precise) and this could not have been acquired suddenly, not even in thousands of years, but is the terminal form after millions of years of existence.

Comparative anatomy gives an excellent pointer to the kind of food suitable for the human system and the only possible conclusion being that we should be vegetarian.

We are, of course, members of the Mammalian group, whose mothers suckle their young — a distinction we share with horses, cows, apes, whales and many other creatures. There are four main divisions: the carnivora and omnivora, which for the sake of brevity we can call flesheaters; and the herbivora and frugivora — the vegetarians.

The Flesheaters :

1. Have a relatively short bowel which allows the rapid expulsion of toxic food material — for flesh food, after intestinal digestion forms an excellent medium for the growth of putrefactive bacteria.
2. Have long teeth and most have retractable claws specially adapted for killing and holding living prey.
3. Have jaws which only open and shut in an up and down motion.
4. Do not sweat through the skin (some may have rudimentary traces of inactive pores) but excrete excess moisture through the bladder, and control body heat by rapid breathing and extruding the tongue.
5. Their saliva is minus ptyalin, a chemical which digests starches.
6. Secrete perhaps ten times more hydrochloric acid than vegetarian animals, sufficient in fact to dissolve bones in the digestive tract.
7. They lap water with their tongues and have many other peculiarities.

In sharp contrast, the vegetarian animals :

1. Have relatively long bowels, because their food gives up its nutrients quite slowly, rather in the way that

an accumulator is charged slowly and gives longer service than if charged rapidly. And here, as distinct from the flesh-eater's food, a vegetarian's food breaks down by processes of fermentation favouring a quite different set of bacteria — so that what is bacteriologically suitable for one is unsuitable for the other even if the body makes attempts at adjustment. It is noticeable that the excretion of flesh-eaters are noxious while those of vegetarian animals are less unpleasant and more are suitable for composting and incorporation with soil in a natural cycle. This is due to the types of bacteria involved.

2. They are not equipped with sabre-like teeth and claws for fastening into living prey. Some vegetarian animals like the rhinoceros and bull are fierce and have armaments for defensive purposes, but these should not be confused with the weapons of the carnivores — they do not seek out other animals for food but only protect their mates and progeny.
3. Their jaws not only open and shut but have a slight lateral motion for the purpose of chewing — pulping and salivating food as a preliminary digestive process. Their saliva contains the ferment ptyalin for the pre-digestion of the starches in grains and other foods.
4. Their teeth are different from those of carnivores, not only in shape but in the enamel.
5. They sweat through the skin — like horses and human beings.
6. They take liquids by suction, not by lapping like a cat.

Here, then, we have a very clear indication of the type of food for which we are anatomically fitted to deal, and on which we have lived on this planet for million of years.

Our nearest physiological relations are the frugivorous anthropoids who are still living naturally and without the devitalizing embellishments of cooking, processing, dying and preserving with fire, freezing, carcinogenic dyes and toxic chemicals.

Though we have no wish to revert to the jungle there is good reason to think that the further we get away from raw unfired food, free from adulteration and processing, the less likely we are to be healthy. The evidence furnished by present day health statistics goes to prove this claim.

CHAPTER III

VEGETARIANISM AND HEALTH

Vegetarianism and Health : Why flesheating is unhealthy. Importance of diet in health. What happens when flesh is eaten and non-nutritive substances absorbed. Vegetarianism in pregnancy, childhood, at school, in adult life and old age. Centenarians. Delinquency and raw food diet.

WHATEVER other preoccupations we may have in life, eating is the most important after breathing, for though we can live a few weeks without food we can only exist a few minutes without oxygen and a few days without water. Yet eating is not considered a science worthy of a university chair. It remains a traditionally conditioned habit with little thought on where the food comes from, how it is produced, and the effect it has on the human mechanism.

We have reached a point where the medical world is baffled by widespread ill-health and the increase of a large number of degenerative diseases, which a flood of medicines, vaccines, drugs and surgical treatment is doing little to stem. In fact many diseases with a nutritional cause are on the increase.

We feel, therefore, that a serious consideration of what we eat and the effect it has is very much overdue. Apart from the deleterious effects of living unnatural lives in fume-laden cities ; sitting all day at office desks and so on, health depends, ultimately, on what we eat and drink.

The human body is an instrument of great sensitivity, and like all functional mechanisms, needs power (some form of

force or energy) to make it work. In the case of human beings (and animals) heat and energy are derived mainly from sugars, starches and fats. The structure itself is maintained by metabolic processes in which minerals, vitamins and proteins play an important part.

If there is a prolonged *absence* of any of these basic requirements we suffer from deficiency diseases and particular deficiencies cause subnormal functioning and finally necrosis in different organs. A lack of calcium impairs bone structure, teeth, blood and so on. Most of these conditions can be rectified by a simple dietary adjustment by which the missing vitamin or mineral is replaced.

The body can function quite well for a time by drawing on stored up reserves — as when the bones and teeth are robbed of calcium for metabolic processes. But sooner or later our reserves are depleted and degeneration begins, at which point cures become difficult and we find ourselves in hospital minus a part of the mechanism.

On the other hand, a prolonged *excess* of foodstuffs, and particularly substances with which the human digestive system is not equipped to deal, place a considerable burden on the organs of elimination — for all waste materials have to be eliminated or deposited in some way — through the bowel, kidneys, bladder, sweat pores and lungs.

Although our digestive and excretory systems have a wide tolerance of error, there is a definite point of saturation beyond which efficiency is seriously impaired. The bloodstream, which is a sort of conveyor belt taking nutritional elements where they are needed and collecting the debris of spent energy and worn tissue, becomes overloaded with toxic elements, loses its alkaline balance, cannot perform its function properly so sheds its load by depositing chemicals in various convenient parts of the body to await a opportunity for dispersal — this is why, when no food is put into the

stomach (in fasting) the blood starts to work clearing up arrears ; nature cure is founded on this simple fact. Rheumatism for instance, is caused by deposits of uric acid crystals in joints and soft tissues.

When the normal channels of elimination become clogged and overworked other organs are brought into use and this operation, while bringing internal relief, is apt to be uncomfortable. The mucous membranes, which are an internal prolongation of the outer skin, help with an excess discharge of mucus — we call this catarrh (excitation by intrusive bacteria has the same effect on a weakened membrane). The skin itself, in addition to the pores, is called into action and we get blemishes, boils and what are called skin diseases. Many symptoms of diseases are thus seen to be an end-product of some internal disharmony caused by too little or too much of certain substances.

Dr. Douglas Latto, M.B., ChB., D.Obst., R.C.O.G., M.R.C.O.G., the London physician and gynaecologist, emphasized this in Paris (*World Forum*, Autumn 1955) when he said "Few people realize that a defective diet is the chief cause of illness and many doctors themselves are unable to recognise this. It is occasionally realized if the effects are immediate, such as sickness following the excessive use of alcohol, or after over-eating on Christmas Day. Doctors recognize that if a patient is anaemic from deficiency of iron, or has rickets or scurvy from deficiency of vitamins D and C respectively, the diet is at fault, and usually correct it — if, however, the patient has pneumonia, heart trouble, arthritis, asthma, cancer, or many other illnesses I could mention, it is not generally realized that a defective diet is the chief causal factor."

Let us now consider what happens when we try to alter our natural diet and become omnivorous.

1. We change the type of intestinal flora to predominantly putrefactive bacteria but retain the long bowel which is not suitable for such a diet. The bulk of even a meat-eater's food consists of material from the vegetable kingdom, which needs its own particular set of bacteria for a complete synthesis and metabolism. So there is, therefore, a condition of strain and the bloodstream has to devote a larger proportion of its energy to eliminating an unnatural element, to the neglect of other functions, for much of the toxic material, which should be rapidly expelled by a short bowel, lingers over-long in the intestines and is absorbed with nutritive substances.
2. In a vegetarian animal vitamin B₁₂ is largely synthesized in the gut, although traces are found in some vegetable foods. Small amounts of meat toxins inhibit this natural development, so really considerable amounts of meat, preferably liver, are necessary to ensure an adequate supply. Vitamin B₁₂ deficiency is known to be a factor in anaemia causation, which may explain why this complaint is so prevalent among people who only eat a little meat.
3. Then, although some second-hand protein, the main food element in meat, is obtainable from flesh, it is obtained in association with many other substances, which under no circumstances can be regarded as nutritive :—
 - (a) The toxic wastes from the dead animal's bloodstream which functions as a debris conveyor in the same way as our own. We, therefore, give our system the additional job of eliminating another creature's unwanted material together with the fear poisons which are flooded into the bloodstream immediately before slaughter (this is na-

ture's way of trying to protect the organism from pain and how fainting is caused by shock and distress).

- (b) As soon as an animal dies decomposition sets in—a perfectly natural process of disintegration more applicable to the forest floor than in the human digestive system. It involves bacterial organisms which can proliferate every 15 minutes at body temperature and their reproduction is only held in abeyance by refrigeration. Over 90% of all recorded cases of food poisoning are caused by these putrefactive germs, showing that there is a limit to our capacity for dealing with intrusive bacteria. It may be said that cooking kills the germs, but even so their remains are definitely toxic and the germs which develop on pre-cooked meat are deadly.
- 4. Domesticated meat-bearing animals suffer from a long list of diseases, e.g., contagious abortion, swine fever, foot and mouth disease, mastitis and cancer caused principally by unnatural living, forced feeding, exploitation of sex functions and rapid breeding. Many diseases, like cancer and tuberculosis are difficult to detect except by a very careful post mortem examination, which, of course, is often not carried out — anything up to 60% of meat carcasses are condemned as unfit for human consumption from a cursory examination. Diseased tissue and the attendant viruses are therefore likely to be included in the diet.

Sanitary inspectors held a Conference at Scarborough in September 1955, and rushed a resolution off to the Government urging new rules for slaughter-houses, so that no more diseased meat is offered for

human consumption, thus revealing that diseased meat is at present finding its way into butchers' shops.

The Chief Sanitary Inspector of Warrington stated "The public should realize very clearly that there was no legal obligation upon Local Authorities to ensure 100% meat inspection, and that this state of affairs existed side by side with legal sanction permitting meat to be removed, within a certain time, whether it had been inspected or not; and this means whether it is diseased or not."

Referring to pets' meat which is produced largely from condemned meat, he said: "Meanwhile the traffic in diseased meat grows apace. Even if no raw unfit meat enters improper channels, there is very real danger in its sale as cat or dog meat. When, however, one hears of offers of more than £ 60 per ton for such material, one may be allowed to speculate about its ultimate destination."

At the end of the war there were about 800 registered slaughter-houses; now there are 4,000 with a wholly inadequate inspection staff. Councillor Whalley, of Knutsford, was grieved "to see a carcass which is obviously going to be condemned, hanging next to one destined for the butcher's shop."

Even if legislation makes careful inspection compulsory it would still be impossible to ensure that virulent and communicable diseases were absent.

5. The presence of greasy animal fats in the intestine tend to inhibit calcium intake, and although calcium is present in a very wide range of foodstuffs, the nation, as a whole, suffers from a calcium deficiency.
6. Animal fats have the doubtful distinction over vegetable fats of containing cholesterol, which is now

known to be a factor in coronary diseases of the heart — this is one of the ailments which is increasing, as are complaints of the associated arteries.

We think it is clear that flesh is not a good source of protein. For many years it was thought that "first class protein" was an essential food element obtainable only from meat, but the 1955 issue of *The Extra Pharmacopoeia* gives the *coup de grace* to this belief: "The terms first and second class protein came into being in the first World War and were based on incomplete analyses of pure protein and on inadequate experiments on rats the terms have now become meaningless and should be discarded."

Since proteins are not generally synthesized in the intestine, but are obtained by eating food, the primary source is in the vegetable kingdom. It is from this source that animals of great strength, endurance and stature, obtain their supplies without any of the disadvantages inseparable from flesh.

So, although there may be other causes for illness—nervous and psychological disturbances—meat-eating is a potent source of factors for ill-health. The fact that a proportion of the world population has tried to become omnivorous does not mean that it is "getting away with it."

Vegetarianism in Pregnancy.

Even orthodox doctors recognise that flesh foods are not ideal in advanced pregnancy and expectant mothers are often advised to reduce meat consumption.

The work at Stonefield Nursing Home by Dr. Cyril V. Pink and his partner Dr. W. H. White over a period of 34 years showed conclusively that the diet which vegetarians believe to be best under ordinary circumstances is certainly beneficial before child-birth.

Experience with about 4,000 expectant mothers, watched during pregnancy and kept in contact for ten years and longer afterwards, cannot be ignored.

Dr. Pink stated in *The Foundations of Motherhood*: "The ideal diet for pregnancy is not much different from that which is ideal for man and woman at other times. The principles are the same, but it is even more worthwhile to put them into practice. It is best to eat mainly fruit, salads, nuts and vegetables, with some cereal; at least half of the day's food should be taken fresh and uncooked, while fruit and nuts are limited it is probably best for most of us to add eggs, milk, butter and cheese in moderation."

Mothers put on a vegetarian diet, even a short time before the birth, were found to gain increased health and exuberance, and have easier deliveries than is normal (often and mostly without the use of anaesthetics).

Vegetarianism in Childhood.

When children are born into the world they live entirely on milk, a specially constituted liquid containing a balanced mixture of vitamins, carbohydrates and protein necessary for growth.

As they are weaned other foods are gradually added and it is clearly absurd to give them the toxic poisons which go with meat, in fact children protest as the first doses of meat and fish are given to them and it is only the persistence of the mother which overcomes this natural resistance. The child becomes conditioned and finally accepts the nasty smells and tastes. In this way most of us become meat-eaters, not from choice but from early conditioning; it is only when our reasoning powers are developed that we can assess the possible advantages of an alternative diet, and by this time most of us are creatures of habit and just carry on.

It appears that there are cyclic periods in life, roughly every seven years, when physiological and psychical changes take place (teething, puberty, etc.). At these times the body makes special efforts towards the elimination of accumulated toxic materials. Round about seven we find a big evidence of "tonsils," these appendages are filters and become clogged and finally septic if the diet is wrong ("tonsils" have suffered coincidentally with the advent of free pasteurized milk in schools between meals). Other child illnesses appear.

It has been found that vegetarian children sail through these childish complaints without difficulty and without bad after effects. It is extremely rare to find a vegetarian child without tonsils and although infectious diseases may be picked up at school, they do not suffer so much and get better quickly. (The author's own children, 16 and 18, have never had a doctor's attention apart from injuries).

The experience of most vegetarian parents is that their offsprings are inclined to be a little too lively.

Vegetarians at School.

There are now a number of schools which cater for vegetarians, but the most famous has been Wycliffe College, at Stonehouse in Gloucestershire. Here Springfield House was exclusively vegetarian for about 40 years and Mr. W. A. Sibly, M.A., J.P., for many years the Headmaster, kept careful statistics.

In his *Vegetarianism and the Growing Boy*, Mr. Sibly states: "The average increase of weight and height has been at least equal to that of boys in the Houses where meat is eaten, and distinctly above the national figures." And in discussing the general growth, well-being and intelligence, says that "with very few exceptions they have splendid complexions, which are often particularly noticeable in the life vegetarians, their vigour and high spirits are more than

obvious, and at times these Springfield boys have incurred special comment, and even criticism, by some masters who have thought them to be unduly vital and high spirited, on the average Springfield boys have nothing to fear from a comparison in class work and examination results."

Mention must also be made of St. Christopher School, Letchworth, which is entirely vegetarian and where the preceding experiences have been duplicated.*

In athletics the vegetarian boys held their own with a favourable margin where endurance was needed, long distance running and swimming.

In Adult Life and Old Age.

After twenty or so years of growth, we do not need as many building foods. Nutrients are mostly for replacement and the amount of energy food depends on activity, whether we are sedentary or manual workers. The protein in dairy produce is specially adapted for calves which grow at a rapid rate compared with human children, its use therefore creates a mild stress at the best of times. In adult life its use can be progressively reduced. Excess fats and carbohydrates are merely turned into fat and obesity makes for physical and mental lethargy.

We are all different, so no hard and fast rules can be laid down. In adult life we should have found out what we can do and eat. Some of us have peculiar allergies and irrational likes and dislikes, but experience shows that a vegetarian diet with plenty of raw fruit and vegetables can help towards the highest degree of health for which the body is capable. We have only to look at National Health statistics to see the folly of living by orthodox methods.

*An illustrated article on this school appeared in *World Forum* (Summer 1956).

Miss Caroline and Miss Jane Badland, of Kidderminster, are the first centenarian sisters in the country. Miss Jane was 103 in May 1956 and Miss Caroline has celebrated her hundredth birthday. Both have the same ideas on health and have been vegetarians for about 70 years. They are also life-long teetotallers. Plenty of fresh air and exercise they also think have contributed to their longevity. They walk a mile regularly to church and go from house to house distributing the church magazine.

On the Sunday before Miss Caroline's birthday the congregation at their Unitarian Church, at which they have worshipped for 93 years, included the Mayor of Kidderminster, members of the Town Council, and the local M.P., Mr. Gerald Nabarro — a special civil service in honour of these remarkable sisters. After totalling 203 years between them they are fit and active. Miss Caroline plays the piano, and since her election to the old Kidderminster School Board 66 years ago has never failed to visit the schools each term. Both have been members of The Vegetarian Society for many years.

Since we often have enquiries about diets suitable for elderly people we asked the Misses Badland for details of their daily food.

From the menu they kindly provided we are happy to see that it is certainly not an invalid diet but a quite formidable list before which many a food reformer might quail !

BREAKFAST :

Porridge with sugar and milk. Coffee, tea or cocoa.
Generally home made brown bread. Dates or Froment or egg.

DINNER :

Nut meat and vegetables or cheese pudding.
Macaroni and vegetables in season.
Any vegetarian pudding. Cup of coffee after dinner.

TEA :

Bread and butter, cake, etc.

SUPPER (about 8 to 8-30) :

Little cheese ground up.

Stewed fruit.

Bread and butter.

Cup of hot milk.

Delinquency and Diet.

Juvenile delinquency is a serious modern problem of growing proportions, which is not being arrested by retributive treatment, since there is a constantly growing supply of new material as offenders are caught and dealt with. The kunckle-duster and cosh are only symptoms of a condition lying deep in the life of the nation.

It may appear difficult to associate diet with ferocious behaviour, but when it is considered that vicious animals are meat eaters and gentle ones herbivorous, we have some slight ground for considering the preposition.

The *cause* of delinquency is obviously not being tackled. Punishment and treatment after a crime aim to obliterate symptoms in much the same way as wonder drugs may fail to heal the real cause of disease.

Psychomatic investigation takes the cause of delinquency back to bad home conditions with lack of parental understanding leading to psychological unbalance. But the logical conclusion here is that parents, too, are only the innocent victims of *their* parents, a never-ending solution and wholly unsatisfactory unless it brings us to the conclusion that other factors are at work besides maladjustment and neurosis to which we are all prone given sufficient emotional strain. The finest physical specimens in the R.A.F. became nervous wrecks after too many bomb runs over Germany.

To understand the violent form of delinquency, which is the visible manifestation of brutality coupled with moral ir-

ROJA. MUTHIAH
ARTIST
KOTTAIYUR P. O.

responsibility, it is necessary to understand the conditioning factors behind our present way of life.

1. Western civilisation accepts killing and violence as natural and justifiable practices for food and national expediency. The two are inseparable.
2. Our life is based on competition which creates a state of strain between individuals and the creature kingdom. Land, power, food, sport, educational opportunities and executive positions with the good things of life, are competitive.

Thus we have structure based on killing and the need to be selfish. It is open to question whether the less intelligent youth caught wielding a cosh is more immoral than the public schoolboy learning commando tactics or the slaughterer with his knife and pistol all have a connection with a perverted need of self-preservation.

A child born in England, is, by the age of ten, thoroughly conditioned by parental example and school teachers to accept slaughter without subjecting the matter to thought processes. He is taught that the great men in history are those who killed with the greatest dexterity; the dead bodies of animals are the gift of God for food; the child is groomed to be competitive.

Where there is economic need or lax morals it is a very short step from killing to live to accepting violence as a justifiable means to an end. Indeed we are brought up to accept this unquestioningly. Meat-eating, which involves the taking of life, is therefore seen to be something of doubtful value at the core of our national life. England is noted for both its "Good Olde Beefsteak" and also the fact that it has fought more wars in more different countries than any other nation under the sun.

There can be no doubt that our unjustifiable assumption that we have the right to kill leads to child and adult delin-

quency, which finds its ultimate expression in the mass destruction of nations.

Diet also must be considered. Delinquency of the violent type springs largely from slum areas where malnutrition is to be expected. The normal diet consists of white bread, fish and chips and beer.

Sir Edward Mellanby found that dogs fed on white agenisised flour died in the throes of fits and that a post mortem examination revealed the dissolution of brain cells.* Thinking, like any other function, is dependent to a large extent on healthy organs. We know that alcohol affects eyesight and car drivers become accident prone because thinking processes are slowed down. Poisons and inadequate nourishment have the same insidious effect and generations of malnutrition tend to produce brains which are subnormal in their capacity to think and make moral choices. There can be no doubt that flesh eating and low nutritive diets are very real factors in delinquency.

In proof of this, organisations like the Salvation Army, have found that a raw food diet effects cures in cases of alcoholism and experiments with a raw food diet have given excellent psychological results among delinquents. Dr. A. B. Cunning had the same results at a home for subnormal children at Liverpool.

*The improver, Agene, has now been changed to another poisonous chemical with unknown long-term effects.

CHAPTER IV

ORTHODOX MEDICINE

Orthodox Medicine and Vegetarianism: Medical practices ignoring the remedial value of diet. Prevalent diseases. Work of Dr. Kirstine Nolfi on cancer. Vegetarianism better long-term policy than drugs.

ONE of the remaining bastions against vegetarianism is undoubtedly the medical profession with its bias towards germs and chemicals; a reluctance to recognise the basic cause of ill health, and resolute determination to ignore the importance of diet — though doctors are aided and abetted by members of the public who actually prefer to have organs cut out rather than submit to self discipline. All are eager for a panacea to allow a continued disregard for the law of cause and effect.

Doctors, as human beings, are splendid examples of devotion to their fellowmen and great credit is due to them for the standard of self-sacrifice they set. This also applies to the nursing profession and all who serve nobly in the healing profession.

The fact remains that heroes can be misled and individual integrity of purpose does not prevent a fundamental misconception of disease and the process of healing. Doctors in their thousands go through a traditionally patterned training and are firmly held on the *pathological* grindstone. Their curriculum does not include a study of health and scientific nutrition, though a few elementary diets for specific complaints may be approved.

After training and a short period in hospitals doctors commence practising with an inexhaustible background of powerful pharmaceutical products with an alarming range of damage potential, dangerous products ceaselessly backed by high pressure salesmanship assuring the practitioner that they are perfectly safe and will give the patient relief and health (while he continues to live in the bad old way).

Fortunately the average practitioner's work is concerned almost entirely with simple ailments which an aperient and rest will usually overcome. Anything serious is sent off to a hospital and the patient is lucky to reappear without some organ missing; being the subject of an experiment with a new drug or a newly thought out operation or the guinea pig for a student surgeon. This is no reflexion on doctors, but on the system they are taught to follow.

The following is a quotation from a speech by Sir Heneage Ogilvie, K.B.E., M.Ch., F.R.C.S., etc., consulting surgeon to Guys Hospital (reported in *The Lancet*^t, 21st January, 1956):

"Surgical heterodoxy is rife in operations on the stomach, peptic ulceration is a very common disease, becoming commoner every year, and the claptrap and sales talk of animal experimentation can be had for the asking, and can be served up to support any theory, however bizarre, and any operation, however unsound. Dozens of new operations have been propounded in the past few years by young men who have not yet shed their surgical milk-teeth. Some of them break all the canons of gastric physiology, repeat the errors of former failures, and have proved disastrous almost from the outset. But all of them have been publicised as epoch making advances, and few of them have been apologised for. The failures are not known widely enough to prevent newcomers who have read the original articles trying the same thing again."

The same sort of "claptrap" to which this eminent surgeon

refers is also readily available to justify the use of untried wonder drugs and vaccines on human beings.

Pain, discomfort and subnormal functioning are nature's first warning that something is wrong with the physical mechanism. Although we recognise that intrusive bacteria, from dirty drains and malarial swamps for instance, can cause ill health in a non-resistant body, the vast majority of defects are directly attributable to faulty living and particularly to an unbalanced diet far removed from the simple, raw, fresh, cereals, fruits, nuts and vegetation on which, as vegetarians, we evolved for millions of years.

The basic *aim* of doctors to eliminate suffering and disease is excellent but far from helping the human system in its efforts to eliminate unwanted substances and correcting the feeding habits which precipitate the crises, the basic *method* of modern medicine is to obliterate and suppress symptoms, hence the vogue for drugs which kill the pain (which warns us of danger) and drive the deleterious matter back into the bloodstream. The patient is given the temporary illusion of health and goes back to the way of living which caused the illness in the first place. Thus the primary cause is still operative and will ensure a return of the ailment, while the body is still burdened with the debris of the first onset, *plus* the drug used to nullify the consequences. Small wonder that the next reactions are violent and that ever more powerful drugs are needed.

This concept is so obviously wrong in principle that the chain reactions are sure to be bad. The new "wonder drugs" often have the startling effect of removing symptoms, but in most cases there are "side effects" of varying degrees. The body builds up an allergy in a very short time and the continued use of any particular drug can be disastrous and the patient may die from another disease, artificially induced, which will not affect the statistics of the drug which caused it.

For instance, a rheumatic fever patient treated with suppressive chemicals like salicylates may die later from heart failure or suffer with a weak heart for the rest of his life, whereas treated dietetically with fruit juices the condition may clear without after-effects. In *The Conquest of Rheumatism* Dr. B. P. Allinson stated: "There are many thousands of people in this country suffering from valvular heart disease as the result of the wrong treatment of acute rheumatism. By means of careful dieting (always vegetarian) sufferers from valvular heart disease can be greatly assisted, and the problem of the cardiac cripple should not arise."

Any organ, from the brain to the kidneys may be seriously affected by drugs administered for any reason, the final result may be long delayed for the body has great resilience, but there is bound to be damage because the body, was not meant to have toxic materials introduced orally or intravenously. Their introduction unfortunately places a burden on the organs of elimination, upsets intestinal flore, natural bacteria and the nervous system.

Drugs, chemicals and vaccines are not only a potential danger to the patient, but may, like atomic radiation, reappear as horrible diseases in the next generation and cases are reported in medical journals from time to time, but receive no publicity among the general public. Vaccination and inoculation of parents are known, among the medical fraternity, to be a possible cause of disease in children. There is reason to suppose that the growth of poliomyelitis is coincidental with the growth of vaccine therapy. Products like the Salk vaccine and the British variants, being hurriedly prepared at the time of writing, may have sorry repercussions for a long time and all parents have a grave responsibility to study both sides of the matter before subjecting the young bloodstreams of their children to such virus-tainted concoctions from commercial laboratories.

What has not been publicised is that only a tiny fraction of the population in Britain is likely to contract any form, mild or otherwise, of poliomyelitis. In America it was said that to protect one child 4,000 would have to be inoculated, and of these 16 would get reactions from the vaccine. The British vaccine is prepared with penicillin and streptomycin and any child might be allergic to these, even if they overcome the virus. It is also a grim possibility that streptomycin (a drug with very violent side-effects) may actuate tuberculous meningitis.

Even more serious is the fact that the first children to be inoculated with a new vaccine are nothing less than human guinea pigs. Then, anyone with a spark of decency should bear in mind that thousands of monkeys, highly sensitive creatures with an amazing capacity for an enjoyment of life, have to sacrifice their kidneys for the manufacturing processes, and still further thousands have their living brains injected with the vaccine to test each batch for virulence. Anything so utterly barbarous, selfish and devilishly wrong in principle could not be right in practice.

Science is a wonderful thing and most necessary, but it must never be divorced from moral considerations. To live wrongly and then put the burden of suffering on innocent and defenceless creatures is not Christian or even human.

Cancer, tuberculosis, heart troubles, disseminated sclerosis and other allied diseases are on the increase, cancer now kills one in six, but hardly an iota of the millions poured into cancer research is devoted to investigation into diet, though Dr. Kirstine Nolfi, of Denmark, has a clinic where hundreds of cancer patients have been helpfully treated for many years (*The Raw Food Treatment of Cancer and Other Diseases*. The Vegetarian Society, 6d.). It is not claimed that raw food will cure cancer, but it certainly appears to have the effect of arresting its development and so is likely to prevent its occurrence.

Forty per cent of the population die of heart and blood troubles and 97 per cent die with a certifiable disease which doctors consider perfectly natural. If the drugs and rivers of medicine which have been poured down the throats of the long suffering public are half as efficacious as we are led to believe, ill-health would have been eradicated ages ago. This happy state of affairs is far from being the case. Hospitals are overcrowded and have waiting lists. There is one overworked doctor to every 800 head of population and £ 500,000,000 a year are spent on National Health Services. These facts are not a testimony for modern healing methods, but an admission of failure to understand disease or to cope with its results.

The bare fact is that most drugs and inorganic substances are anathema to the human system. This is an admission in *The Lancet* (12th November, 1955):—

“ Unless a useful proportion of the dramatic immediate effect is sustained and unless the risks prove slight, these new steroids, like Cortisone, may be more appropriately reserved for disorders that are in general more dangerous to life.”

This is as good as stating that they should only be used if the patient is likely to die anyway.

It is one thing to criticise orthodox medicine but we can well understand people suffering from painful diseases turning readily to any therapy which offers the prospect of immediate release, however drastic the later results may be. But in vegetarianism and a balanced diet we have a long term policy which will gradually help to eliminate ill-health.

It has been proved that a vegetarian diet is more conducive to health, and the practice of nature cure is founded on the fact that a short fast allows the bloodstream to devote its cleansing energies to the system, and that vegetarian food is both remedial and prophylactic.

We have a responsibility to ourselves and future generations not to allow our bodies to develop chronic complaints. Even congenital conditions and most illnesses are due to some form of unwisdom or negligence. We do not deny that surgery and drugs may become necessary ; that uneducated natives in jungles and areas where malnutrition is unavoidable may be greatly helped by modern medicine, but we greatly deplore the wholesale and injudicious use of powerful suppressive drugs in a community where the application of more intelligence would ensure a greater freedom from disease.

The milder range of bottle medicines do undoubtedly help certain complaints, but if truth were known, most of them consist of aperients, soothing substances (often herbal in origin) which reduce irritation and allow the bloodstream to do its healing work. 99% of the minor complaints would never arise on a rational diet. Pain killing tablets merely mask a condition and leave causes untouched.

CHAPTER V

FOOD ADULTERATION

*Food Adulteration : Effects of industrial revolution on food.
Processing and chemical treatment. Poisonous insecticides.
Hazard of fluorine. Blood plasma and confectionery.*

VEGETARIANS are not necessarily food reformers from a scientific, hygienic or health points of view. Some refrain from flesh-eating on ethical grounds and are quite satisfied that they are relieving a burden on the creature kingdom by lessening activities in the slaughter-house. Others, however, are keenly interested in reforming food production so no advocacy of vegetarianism would be complete without some reference. Indeed we think it is of great importance since the joy and efficiency of living can be seriously impaired if proper food is not eaten.

The industrial revolution in Britain meant that people were drawn from the countryside and concentrated in cities. Then the emancipation of women at the beginning of the century released them from the usual occupations of housekeeping, domestic service and food preparation, so millions began to earn their own living in shops, offices and factories. Both these circumstances precipitated a food problem. On the one hand by making fresh food difficult to obtain because of transport into great urban areas, and on the other by creating the necessity for foods with a "shelf-life" and easy to serve. This meant that food had to be processed, tinned, dehydrated, pre-cooked and preserved.

There is no greater danger at the moment than the widespread adulteration of food, and this affects meat-eaters and

vegetarians alike. The menace is more widespread than most of us dream. It is increasingly difficult to obtain food in a clean natural state suitable for human nutritional needs. There can be little doubt that many of the ailments and serious diseases which beset us today are the direct result of food adulteration and devitalization either in cultivation or preparation.

The chemical treatment of food has long since passed the point where it might be ascribed to ignorance and the interests of capitalism, it has reached criminal proportions in the hands of unscrupulous manufacturers who do not hesitate to make use of poisonous materials, toxic to humans and animals, before proper investigation is made into the possible effects on health.

There are at least 704 chemicals now being used in the processing of food, 276 of which have not yet been proved harmless *Delaney Report*, U.S.A.).

One of the basic facts we must never forget, when considering the natural and most beneficial diet of man, is that the creature part of us, our physical equipment, has persisted on this earth for millions of years on unadulterated food. Physiologically we are frugivorous. It is only during the last few thousand years, since the ice ages, that some men have been reduced to carnivores and parasites living on other creatures. And it is only during the last fifty years or so that we have taken to eating crude mineral chemicals.

Instead of eating raw, unfired food, straight from the earth or tree, we poison our vegetables and fruit with insecticides and artificial fertilisers. We use harmful chemicals and gases to preserve and colour processed foods ; poisons and drugs are used to combat the symptoms of diseases ; water supplies are treated at source with chlorine or fluorine ; the air we breathe is contaminated with radio-active particles from atom

bombs, with carbon monoxide and fumes from industrial plants. The list is endless but part of our danger lies in the increasing ingenuity of chemists, who are adept at finding more expensive and profitable ways of introducing poisons.

Some recent developments include injecting chemicals into the bloodstream of animals to kill the insects which infest the hide and hair, in addition to the vaccines and sera inoculations against disease; systemic poisons which flow through plants to kill their insect enemies, all these things are present and virulent in the resulting foodstuff.

The Government tries to limit the amounts of substances which may be used in the *preparation* of food but not those dangerous in cultivation. The cumulative result of hundreds of those deleterious adulterants may well be disastrous.

It is not natural to die of disease — disease means that natural law is being violated persistently and in a big way; for the body is extremely resistant to wrong treatment or we should have been wiped out long ago. The natural food should be eaten as and where it grows, in the same way as the rest of the creature kingdom obtain its food. The further away we get from fresh raw food the less likely we are to be healthy. The more crude chemicals we eat, a process for which we are not fitted, the more chronic our ailments will become.

Radio-active tracer elements show that a poisonous insecticide sprayed or dusted on to the leaves of a plant or tree travels all over the plant's circulatory system in a very short time — arsenic is a favourite, and among the less poisonous substances used. D.D.T. so poisonous that it has been banned in America, passes straight from a plant to the milk of a cow or the yolk of an egg — the digestive processes of the creature doing nothing to render the poison less harmful.

Systemic insecticides pass to the nectar of flowers and, if bees are not poisoned on their way back to the hive, add their

deadly harvest to the honey combs where it is preserved for human consumption.

Apart from chemical constituents in food, produce from the vegetable kingdom (which includes fruit, nuts and cereals, etc.) contains a life force which is as essential to health as the coarser mineral elements.

When the life-force is withdrawn from an animal the process takes place rapidly and allows disintegrating forces to operate very quickly. In vegetable matter the life-force is of a more diffuse nature and remains active for a considerable time. But food will not keep indefinitely and so, to meet the needs of present-day life, it is preserved to enable us to buy it from shops.

When fruit is bottled the heat kills the agents which hasten disintegration — it also “kills” much of the food value and vitamins.

Packeted and tinned foods, cooked and preserved foods, contain chemical preservatives, emulsifiers, artificial flavouring and colouring agents, improvers, bleachers, anti-rancidity agents, sweetening (not necessarily sugar) antiseptics, dyes, etc., etc. Frequently the products are “fortified” with synthetic nutrients to offset those lost in processing. The National loaf is only one example. Health ensuring elements are removed in milling the flour which is then subjected to poisonous treatment with chemicals to improve the appearance. Crude mineral chalk is added to replace calcium and so on — giving a nice profit to chemical manufacturers but a harmful food to the people, for the balance in which nature presents food cannot be reproduced in a laboratory and minerals can only be properly used by the body when in conjunction with particular vitamins.

A fairly new help towards profit making by bakers and confectioners is the “fat extender” called polyoxyethylene

stearate, which breaks down the surface tension between oil and water and thus allows a little fat to go a long way. It is admitted that this chemical will cause diarrhoea, a complaint which indicates that the bowel is in a hurry to expel a noxious substance in the same way that the eye floods with tears when irritated.

The food value of milk is decreased by pasteurization and some of the germs and bacteria killed by heat yield toxic products. Since free milk has been given to schoolchildren between meals the incidence of "tonsils" has risen until practically every child is either about to have its tonsils removed or has just had the operation.

Fluorine, which is present in ordinary vegetables in quantities necessary for human consumption, is the subject of much controversy since it is now recognised as a dangerous poison. The chemical is used extensively in the baking industry and self-raising flour.

The report of the Metallic Contamination Sub-Committee of the Food Standards Committee states "There is considerable evidence that the drinking of water containing about 1 part per million fluorine is accompanied by a reduction in the incidence of dental caries." A balanced vegetarian diet provides all that is desirable — anything added chemically gives an excess. On the other hand, "the drinking of water containing more than 1.5 or 2 p.p.m. fluorine has been recognised since 1916 to be responsible for the dental condition known as mottling of the enamel." The ingestion of fluorine in large amounts may lead to overgrowth and brittleness of the bones and calcification of the ligaments and tendons which in extreme cases may cause immobility and death in animals and severe malformation in man.

The use of this chemical in self-raising flour, taken with the amounts naturally present in food, ensures an excess of

fluorine in the system. The widespread use of phosphatic fertilizers also gives an unbalanced quantity in plants which absorb the most readily available elements in the soil.

Grazing and green vegetables are poisoned by artificials — cattle prefer to stick their necks through fences to eat the natural grass and it is time we discriminated between wholesome produce and the stuff grown hurriedly to give a quick profit to horticulturists.

In May, 1946, the Inter-Departmental Committee on Food Standards published a report on the question of prescribing limits to the fluorine content of acid phosphates used for food purposes : “ On the evidence then available it was only possible to make an approximate estimate of the maximum amount of fluorine which could be ingested daily over a period of years without harmful effect. At that time a small but indispensable part of the acid calcium phosphate used for food purposes was manufactured from rock phosphate highly contaminated with fluorine. The Medical Research Council who were consulted by the Committee pointed out that the effects of fluorine are cumulative and that fluorine absorbed in small quantities over a sufficient period of time can produce pathological changes in the kidneys and gross lesions of bone in animals.”

It is interesting to note that dry tea may contain up to 100 p.p.m. fluorine. “ The Hazard to man and animals arising from exposure to fluorine compounds emanating from factories manufacturing aluminium near Fort William, Scotland, was the subject of a report in 1949. Some of the older workmen who had inhaled fluorine for a large number of years showed bone changes of the type generally recognised to be produced by fluorosis, but none of the workers suffered clinical disability. Sheep and cattle grazing near the factories suffered from gross deformity of the teeth and jawbone which make mastication difficult or impossible and led to inanition.”

It will thus be seen that one chemical can have deleterious effects on health. Multiply by hundreds and we get some little idea of the insidious work which goes on as we accept food without considering how it is produced.

In addition many substances from the slaughter-house are used by confectioners, bakers and ice cream manufacturers, which a vegetarian would avoid if properly informed.

Waste blood from abattoirs is turned into "plasma" as a substitute for the white of eggs and is used extensively.

Lard and other animal fats find their way into cakes and confectionery.

CHAPTER VI

FOOD POISONING

*Food Poisoning : Bacterial organisms associated with meat.
Flesh foods cause of most of the cases of food poisoning.
Cooking does not necessarily destroy harmful germs.*

FREQUENT large scale food poisonings have drawn attention to the grave dangers to health and life involved in eating the flesh of dead animals. In the majority of cases the poisoning is believed to be caused by pathogenic organisms, or the toxic matter they provide by excretion and death. It is extremely rare to find poisoning resulting from botulism — from improperly canned vegetables, when discolouration of the product is easily detected.

The outbreaks demonstrate the necessity for unadulterated and unprocessed foods ; foods fresh from uncontaminated sources and where putrefaction is impossible — particularly for school children who need food of the highest nutritive value. It is a crime that food produced for school meals is frequently cooked a long time beforehand, transported and reheated, perhaps a day or two later, thus giving ample time for the wholesale development of poisonous organisms.

It is in the nature of meat to putrefy quickly. Processes of putrefaction commence immediately on the death of an animal and these are hastened by the toxic poisons, in the form of bacterial vaccines, injected into their bloodstreams to counter the many diseases from which cattle suffer.

Human and animal flesh is practically water proof and an excellent insulator of heat. If pathogenic organisms are pre-

sent in raw meat, and there is no doubt that they always are, cooking operations are not sufficient to destroy them. Even with prolonged cooking at high temperatures (which destroys food value) the interior of meat remains at a relatively low degree of heat, and if any of the harmful organisms are killed their bodies remain in the meat as a dangerous toxic residue.

An experiment with a 13 lb. ham placed in cold water showed an interior temperature of only 25°C when the water boiled. After two hours the temperature was only 46°C to 67°C in various parts. Meat in cans showed that the interior temperature did not reach 100°C even after five hours in boiling water.

We have another example of the effects of a toxic residue in pasteurized milk which does not turn naturally sour but goes putrid, as anyone who has tried to make yoghurt will testify.

The Salmonella group of organisms, which are said to be responsible for many of the outbreaks, are parasites found in the intestines of man and animal — given suitable conditions they become a menace but it is known that they are rapidly destroyed by fruit juices.

Although some of the salmonella organisms are peculiar to other animals, they are now being found to be adapting themselves to the human system through frequent introduction by eating meat, which has become overcharged with them through excessive delay between slaughter and consumption.

A particular menace is found in frozen meat and a very large proportion of the meat consumed in this country is imported and frozen. The incubation period of many bacteria is extremely short (two to four hours or less, some every 15 minutes,) by the time meat is conveyed from the slaughterhouse to the freezing rooms, in which it is often stored for months before and after long sea voyages; delivery to

butchers and exposure in shops ; bought and cooked and perhaps rehashed the next day ; pathogenic organisms have had plenty of time to generate a highly toxic and virulent poison.

A very short time in a warm atmosphere, such as a shop window, generates bacteria of the *Proteus* group. These accelerate decomposition and make the meat soft and slimy, thus providing a suitable medium for the culture of noxious substances and organisms.

Foodstuffs such as meat pies, potted meat, brown, pork pies, and tinned meat, are frequently made up with gelatin and allowed to cool slowly — gelatin has long been recognised as a culture medium in laboratories so these foods provide an excellent base for the development of organisms already present in the meat.

The health of meat animals is rarely considered in relation to outbreaks of food poisoning, but it is known that many animal diseases are caused by the *Salmonella* organisms. Even when the disease is acute during the animal's life the carcass is not noticeably unhealthy. The incidence of udder trouble and umbilical sepsis, mastitis and catarrhal conditions of cows, which are slaughtered for food when their milk yield becomes uneconomic, is relatively high and are not detected in the corpse except by a very careful post-mortem examination.

It will thus be seen that whatever small proportion of nutritive value may be wrested from meat there is an ever-present danger of poisoning. This may not reveal itself as a widespread outbreak but work insidiously on the health of the individual. It is also certain that a great strain is placed on the eliminatory organs of the human body (including the skin which is the biggest) by the consumption of meat, which, however fresh, is the carrier of organisms and toxic material inimical to health.

Salmonella poisonings invariably reach their peak in the summer months and particularly in July due to warm atmospheric conditions and an increased sensitivity of the human alimentary tract.

Fruit, nuts and vegetables retain their life force for a much longer period than animal flesh, and most of them can be stored for a considerable time without deterioration, besides having none of the deleterious substances associated with meat.

CHAPTER VII

SCIENTIFIC NUTRITION

Scientific Nutrition: The reasons for eating. Digestive processes. Calories unreliable guide for nutrition. Latest knowledge on proteins, carbohydrates, fats, minerals, and vitamins with sources and properties.

WE eat for the specific purpose of nourishing the body. Any pleasure we obtain in the process is secondary, though it is desirable to stimulate glandular secretions by creating attractive sensations for the eye, nose and palate.

It should be remembered that the study of nutrition is incomplete and there may be many important factors, connected with the natural magnetism or life force, that have and will remain undetected in a laboratory; that life has persisted for untold ages without anything but experience and instinct as guides, and without knowing anything about minerals and vitamins. In a sense a contemplation of the science of nutrition is purely academic. Nevertheless we can avoid many irritating complaints by studying nutrients and digestive processes, and perhaps we need to be more scientific in order to get back to a more rational way of living.

There are at least three main reasons for eating and drinking—

1. To promote growth, particularly when we are young.
2. To supply the fuel for energy (heat) to operate the physical mechanism.
3. To maintain the structure, the bones, tissues, organs, bloodstream etc. at optimum efficiency.

Digestion is a complex process, but, put briefly, consists of the breaking down and assimilation of foodstuffs. The sequence begins by mastication in the mouth where the raw materials are pulped and moistened with saliva. Nutritionists tell us that hardly any absorption takes place in the mouth, though some starches are partly broken down into sugar maltose. This may be true of coarse bulky materials, even of liquids, which pass rapidly to the throat, but considering the immediate and violent reactions of certain poisons placed on the tongue, and the nervous stimulation from attractive tastes and esters it may well be that many ultra fine impulses, and as yet unknown nutrients of a finer nature are absorbed.

The next stage is reached in the stomach where the food is mixed with gastric juices. (The normal person produces the amazing quantity of about three quarts per day and this contains about .3% hydrochloric acid). These juices begin to digest proteins and curdle foodstuffs such as milk. It is here that the bloodstream commences to pick up nutrients, such as alcohol, sugar, water-soluble minerals and vitamins, and water.

As the conglomerate and liquified food passes down the duodenum to the small intestine starch becomes glucose, proteins are separated into their basic amino acids, fats are emulsified and made water-soluble. Most of the nutrients are absorbed into the bloodstream from the small intestine — sugars are delivered to the liver for storage as glycogen and are converted back to glucose when energy is required, any excess is converted into fat and stored in the tissues and this is why carbohydrates are so fattening. Proteins and fats are distributed where needed. Soluble salts are absorbed and excesses are excreted by the kidneys, while excess minerals, and so on, are excreted through the bowel.

Some coarser materials reach the large intestine without being greatly changed but they are here dealt with by bac-

teria, which not only make the constituents available as nutrients, but digest the materials themselves.

Once eaten food is continually being churned, squeezed and liquified; pressed, by automatic muscular contraction through one-way valves. It travels through a one-inch pipe, twenty feet long in the small intestine, and finally, about four hours after a meal, through the large intestine which is two inches in diameter and five feet long, where excess liquid is taken up and unwanted materials formed into faeces, being expelled anything up to 22 hours after the meal. (The Swedish system of health taught by Are Waerland set three loose evacuations per day as necessary for health). The kidneys control the amount of liquid in the bloodstream so it does not become diluted.

This brief survey shows the importance of correct feeding, for any materials taken through the mouth, which are not suitable for nutrition and maintenance, clog the whole system and divert energy towards elimination at the expense of normal functioning — even thinking which requires energy.

Nutritional needs based on the Calorie are fallacious since thousands of calories can be obtained by eating white bread all day. The Calorie is simply a unit representing the amount of energy required to raise one kilogram of water through one degree Centigrade — and as a reliable guide to nutritional requirements can be misleading. In any case, requirements vary widely in different individuals, depending on energy output. A very varied diet, with a slight bias towards alkaline forming properties, is necessary and in this way a balance is more likely to be achieved. (see Appendices).

Proteins.

Protein is a complex substance containing anything up to 20 amino acids and is found in all living matter from leaves to animal muscles. It is needed for the growth and mainte-

nance of our bodies, and is only a minor source of energy most of which is taken up by the kidneys. A certain amount of excess protein may be converted into a small amount of fat and stored somewhere in the body for reserve energy. But normally all energy is provided by carbohydrates and fats, while protein is devoted to building up the physical structure and effecting repairs to worn tissue.

As stated in a previous chapter we can forget the terms "first" and "second class" protein and concentrate on selecting the best protein for our purposes.

Most of us eat more protein in the form of dairy produce, nuts, cereals, and beans, than is really necessary and although in theory the vegetarian is supposed to eat a lot more bulk than a meateater in order to obtain sufficient supplies, in actual practice this is not so. While proteins are not synthesised in digestive processes, but must be obtained from outside, the amino acids can be changed during digestion.—"The human body can convert many amino acids of kinds it does not need into amino acids of kinds it does need" (H.M.S.O. *Manual of Nutrition*).

"Essential amino acids" which cannot be made in the human body are (for the adult) methionine, lysine, tryptophane, phenylalanine, threonine, leucine, isoleucine and valine. For children two others, arginine and histidine also appear to be desirable (*Extra Pharmacopoeia*). We should not be alarmed by the analytical chemists' assays of a particular food, which may only have three or four proteins, because in a varied and balanced diet all needed elements are found.

It is sometimes argued that meat protein is *already* in a form suitable for use by human beings because it is already homogeneous and there is a difference between vegetable and animal protein. But, as we have seen, animal protein from meat is not pure, it is associated with many noxious sub-

stances and since we have the mechanism for metabolism it should be used and not be allowed to atrophy — laziness and the easy way are never good.

Experiments on university athletes and men in the United States Army show that a reduction of protein intake results in a marked improvement of physical performance — this is in sharp contrast to the long held idea that athletes need enormous quantities of meat. It is also interesting to note that the team of climbers which conquered Everest in 1953 had its protein intake progressively reduced the nearer to the summit it climbed.

It must be remembered that immediate energy comes mostly from carbohydrates — starches and sugars — so people needing more energy than usual obtain it from this source and not from protein.

After many years of meat-eating it is not recommended that protein should be obtained solely from vegetables. It can be done, but it is advisable to have a generation or two of ordinary vegetarianism, with the sparing use of dairy produce, before launching out into veganism (the practice of abstaining from all animal by-products. (See Appendices.)

Investigations on Dutch, British and American vegans revealed a proportion of deficiency symptoms (none in the American ; Wokes, Badenoch and Sinclair 1954) and a small number of deaths have been reported. Many factors, some unknown, may have been responsible, but one which should not be overlooked is that very little food is now properly grown or free from chemical contamination, which may upset the natural balance — this is equally true of meat, for the animals are reared on chemically fertilised crops, forced fed, artificially inseminated, vaccinated and innoculated.

Wheat-germ, nuts, peas, beans, and dairy produce are all better sources of protein than meat, with none of its dis-

advantages. It is therefore, only a matter of intelligence to make a selection from the best source and one which causes the least interference with the natural life of another creature. (Food values are given in the Appendices.)

Proteins are not greatly affected by ordinary cooking but excess heat tends to alter their structure and availability. Cooking and processing in any way denatures and devitalizes any foodstuff; destroys the natural balance of vitamins, minerals and proteins which is essential for full nutrition, because each is dependent to some extent on the presence of the others for correct metabolism.

Carbohydrates.

The main difficulty with carbohydrates is not finding them but avoiding their excessive use, for they are present in many foodstuffs and when we eat too much — in bread, potatoes, cakes, sweets etc. — the body converts these energy foods into fat with dire results. (Meat is a very poor source of carbohydrates).

There are two main forms of carbohydrate.

1. Starches.

2. Sugars.

1. Most plants store the greater part of their reserve food supplies in the form of starch — a chemical combination of glucose units. The cereals retain it as starch, while in fruit it is converted into sugar as ripening progresses. Starch is not easy to digest and that is why we “dextrinize” the starch in potatoes and grains by cooking by heat or boiling water. This is because plants store their starch in little waterproof capsules, which have to be burst before we can digest the starch granules.

2. Sugars play an extremely important part in bodily functioning and are of five principal kinds :—*Glucose*,

a simple sugar from plant starch, *Fructose*, which is capable of being changed into glucose, is very sweet and comes from plants — honey is rich in it. *Sucrose* which occurs in cane, beets, carrots, melons and sweet fruit. *Lactose* which occurs in both animal and human milks. *Maltose* is formed during grain germination and fermentation processes.

Sugar is a quick source of energy and can be converted into fat reserves and is not found in flesh foods.

White sugar is practically 100% carbohydrate but is an “unnatural” food and robs the system of calcium in the process of being turned into heat. Unrefined sugar is far better as a nutrient because it is received in conjunction with minerals necessary for metabolism. Cane Sugar, Barbados, and genuine Demerara are recommended.

All the sweet fruits, from apples to raisins are good sources, so are nuts, honey and maple sugar.

Fats.

Fats and oils are readily available in a vegetarian diet from fruits like olives, nuts, dairy produce and a wide variety of seeds from which most of our present day cooking fats and margarines are made.

Vegetable fats have the added advantage of being minus the cholesterol in animal fats, which is a factor in coronary diseases of the heart.

During digestion fats are emulsified and become water soluble in a process called saponification when the glycerol is freed. The liver sends bile to the duodenum and breaks fats up into tiny globules and the components are then finally split by a pancreatic secretion. The main purpose of fats is to form long term energy stored in various parts of the body. Not a great deal is required daily and an excess of greasy

animal fats lining the gut inhibits calcium intake. Fats eaten in conjunction with other foods have the effect of slowing down the passage of foods in the stomach and thus give a feeling of repletion — excess can easily cause a comatose condition.

There are many different kinds of fatty acids and each may serve a different nutritional purpose. It is, therefore, wise to ensure a wide variety. Mineral oils like liquid paraffin are irritants and cannot be digested. This is why the digestive system expels them as quickly as possible and why they may be carcinogenic.

According to *Manual of Nutrition* (H.M.S.O.) the distinctive flavour of butter is due to the presence of butyric acid, while caprylic acid is found in coconut oil, butter from cow or goat milk, and is one of the substances which give goats their characteristic smell. Palmitic and stearic acids are present in nearly all fats, especially solid ones. Oleic acid is found mostly in liquid oils.

About half the quantity of fat eaten may be laid down as a reserve in the body so this fact should be taken into consideration in any slimming operation.

Minerals.

There are about 19 mineral substances in the human body. The chemist refers to these elements as “inorganic” but this may be misleading since the proper source of minerals for nutritional purposes is from organic sources and not from a laboratory or direct from the earth.

Minerals have definite functions to perform but most of them can only do these in association with appropriate vitamins and catalysts — though evidence shows that the blood does take up crude minerals, e.g. iron from “rusty” water. They maintain alkalinity, help in metabolic processes and

form a basis for the physical structure — bones, teeth, etc. as well as being important constituents of all the organs, blood and tissues. Their presence in balanced quantities is therefore of supreme importance and deficiencies soon show in disease symptoms.

Many minerals are present as soluble salts, like sodium, potassium and chlorine, and these give stability to body fluids. Others like iodine and ammonia are volatile elements affecting glands — the thyroid needs iodine, for instance.

Sodium.

There is a good deal of controversy among food reformers concerning the use of table salt. It is certain that all body fluids need sodium chloride, particularly the bloodstream, and a deficiency will lead to muscular cramp.

If vegetables are not overcooked and the natural salts leached out into the water, table salt should not be necessary — a little may be desirable if :—

1. Vegetables are overcooked and demineralised.
2. If large amounts of sodium are excreted by sweating in heavy manual work or in very hot climates.

Ordinary commercial propriety brands of table salt are adulterated with magnesium salts to offset the moisture-attracting properties of salt and this is no good to us. Iodine is also added and again may be injurious as only minute quantities are required and these are normally picked up in vegetables and drinking water. Only a few counties in Britain are said to have iodine deficiency in the soil.

It still remains controversial whether to take salt or not. An excess is certainly harmful, but small amounts may be helpful. With a balanced vegetarian diet, which should include at least one raw salad a day with a large variety of raw vegetables, it is found that the appetite for crude salt

diminishes together with a need for hot spices and vinegary piquants.

Dairy produce, especially cheese, has considerable amounts of salt added during manufacture and this should be enough, if indeed, crude salt is needed.

Different authorities give different opinions. Some give lists of sodium foods ranging from nuts, fruits and vegetables; others state that most of the chlorides from vegetable sources come in the form of potassium. We are left to strike a balance for ourselves — in fact take the scientific data with the proverbial pinch.

Potassium.

This chemical is said to behave in a similar way to sodium chloride except that it is not lost in perspiration. Nearly all vegetables, bitter herbs and tomatoes contain appreciable amounts, and although tables show fish and raw mutton as being the rich sources, the creatures themselves obtained the chemical from vegetable matter. Potassium is said to be necessary for the functioning of the nerves, and is connected with their elasticity.

Phosphorus.

Together with calcium, phosphorus is a main constituent of the bones and teeth. It plays an important part in the release of energy from nutrients, feeds the nerves, brain, and is connected with thinking energy. It has been a long held belief that fish, which is a rich source, is a "brain food," but although it is connected with brain cells, phosphorus eaten as a food has no direct influence on the brain itself. All cells in the body need supplies of phosphorus but only as they are required and so do the body fluids. The best sources are from cheese, oatmeal, all seeds, cereals, vegetables, nuts and some fruits. No ordinary diet is likely to be deficient in phosphorus since it is very widely distributed.

Calcium.

Calcium again is very widely distributed, so that in practically everything we eat, except meat, it is present in significant amounts — horses and elephants obtain sufficient for their large bone structures from simple herbs and leaves.

Paradoxically the British nation appears, on the whole, to be deficient in calcium and this is probably due to the greasy animal fats in the intestines which inhibit intake. Then most of the foods eaten by the population are demineralised, generally denatured, and robbed of vitamins which are essential for mineral metabolism.

At one time it was said that the phytic acid in wheat inhibited calcium availability from wholemeal bread, but it is now known that baking in association with yeast breaks down the phytic acid leaving the "wholemealer" better off than the "white breader" with his chalk fortified loaf. Calcium, phosphorus and vitamin D must be present in a nature-decreed proportion for proper absorption and use.

Calcium is necessary for the teeth, bones, blood and for muscles. Rickets, bad teeth and retarded growth will show if children are deprived of calcium. They need bigger quantities than adults, about three times as much. During pregnancy the mother's teeth and bones are robbed of calcium if the diet is not adequate. X-rays show that the blood draws upon bones to remedy its own deficiency and the skeleton becomes hollow allowing easy breakages. Calcium is also one of the factors in the ability of the blood to clot. Cheese is one of the richest sources.

Magnesium.

This chemical is also very widely distributed in nuts, pulses, beans, cereals, figs, apricots and dates, to say nothing of dairy produce. It is also associated with bones, teeth, blood

alkalinity and the nervous system. The hard enamel of teeth is due to its presence in greater proportion than in bones — ivory is also said to owe its durability to magnesium.

Sulphur.

There is no fear of a deficiency of this mineral element as it is found in most foods. It is a blood purifier and helps to throw out impurities through the skin.

Iodine.

This is a trace element which stimulates and balances glandular secretions and, unless there is a serious deficiency in any particular part of the country, is found in many vegetable foodstuffs. A local deficiency can be made good with Irish Moss, kelp and seaweed products, and indeed, any usual vegetable from onions to cabbage and celery grown in another part of the country. In actual fact we eat vegetable products, not only from widely scattered regions in our own country but from the continent.

The soils of Derbyshire and North Oxfordshire are notoriously deficient in iodine and "Derbyshire Neck" is an almost universal expression for goitre, which results from a lack of iodine. Tibetans have the same difficulty. However, since only very small quantities are required, and dairy produce is a good source, no difficulty should be experienced. Iodine may be lost to the water in cooking so, as with other minerals, the residue water should be used for making gravies and sauces.

Fluorine.

While being essential, excesses are fatal. Sufficient amounts are found in cereals, brown rice, greens, watercress, etc. for normal requirements. Unfortunately, tea and baking powder tend to give an unbalance and lead to mottling of the teeth

and abnormal bone formations — in contrast to a deficiency which causes dental caries. The addition of fluorine to the water supplies is very likely to have injurious effects.

Iron.

Iron is an oxygen carrier in the blood, helps us to resist disease and is present in wholemeal bread, cereals, pulses, green vegetables and some fruit in adequate amounts. It occurs in the human body in about 1 in 10,000 parts, and nearly three-quarters of it is found in the blood, and once obtained from dietary sources is retained for a long time in the red blood corpuscles which break up every six weeks — the iron, however, is used again and again, but needs gradual replacement as some escapes with worn tissues and is eliminated with them. The blood only takes up this mineral as required. (Blood Donors should take extra care to have a raw food diet).

Liver used to be prescribed for anaemic conditions because of its high iron content, but it is now thought that its vitamin B₁₂ is the beneficial factor. If a moral issue might be introduced at this point it is that any substance found in liver is, with the liver, the property of the animal concerned and not an organ for public use — it is the height of selfishness to kill a creature to acquire a part of it.

Copper.

Copper is concerned with conveying oxygen in the bloodstream in close association with iron. It is found in traces in almost all foods. Poisoning can result from an excess acquired from copper water pipes and utensils.

Zinc and Cobalt.

Both these minerals are unlikely to be deficient in a normal diet, except perhaps where the soil is poorly supplied.

Sheep are known to suffer when living on pastures in poor cobalt areas and develop anaemic conditions. Cobalt is known to be associated with the elusive Vitamin B₁₂ and may have some influence on the pituitary gland.

Manganese.

Although no deficiency symptoms have yet been found in man, manganese is an essential mineral with antiseptic qualities. It is known that it affects the growth rate of animals, skeletal metabolism and foetal development. A sufficiency of leafy plants in the diet ensures an adequate intake.

Silicon.

This is an important constituent of the body and is found in most vegetables, cereals and fruit. It is probably connected with brain activity and is certainly present in the hair and skin, thymus, tendons and eye lenses.

Oxygen.

This element is absorbed from the air via the lungs, but is also present in a number of vegetables. This is probably the most important as we can only live about four minutes without it. Lack of it, or impure supplies, severely impair brain functioning — tobacco smoking, which obviously reduces oxygen intake in the matter of bulk, is therefore bad apart from any injurious chemicals in the smoke.

Carbon and Hydrogen.

These are picked up without any difficulty — apples, beans, cereals, dates, grains, lentils, grapes, peas and potatoes are "carbon foods" and help to generate heat. Berries, fruit, melons, milk and non-starchy vegetables are "hydrogen foods" and have a cleansing effect.

VITAMINS.

The subject of vitamins is vast, and while interesting, we cannot emphasize too often that it is largely academic and need not be a matter of concern if we have a varied diet including fresh raw fruit and vegetables. After all life has persisted for millions of years without the recent knowledge of nutrients — largely, of course, because food has been eaten fresh and as it grows in the natural humus.

A knowledge of vitamins and minerals is helpful in that many minor deficiency ailments can immediately be corrected by a dietary adjustment.

Already we have a list of vitamins from A to K and P with the B group running to B₁₂. There is no doubt that more vitamins will be isolated and create a temporary panic because they cannot be found in ordinary foodstuffs. It is equally certain that magnetic life force qualities will eventually be detected and we shall have Radiomins.

Supplementary doses of laboratory fabricated vitamins are not advocated, for while they may fulfil a temporary deficiency in an emergency, most are wasted because other catalysts must be present. If they are not eaten together at the same meal metabolism does not take place. The massive doses given to children in the form of cod and halibut liver oil are now known to diminish appetite and have a deleterious effect on health. Medicinal supplementation should only be resorted to if chronic conditions have been allowed to develop.

All the vitamins necessary for health are to be found in the vegetable kingdom, or are synthesized during digestion by bacterial activity in normal healthy animals. Of the vegans examined for deficiency symptoms, the Americans and a proportion of the Dutch and British were found to be functioning satisfactorily, so dairy produce (a second hand source of some vitamins, notably A and D) is not really necessary in

theory, though for some people it may be desirable after generations of flesheating.

Vitamin A.

This usually occurs as an ester, but most of our supplies come from the green leaves of vegetables as the provitamin carotene and synthesis takes place after digestion — animals, too, synthesize vitamin A from vegetation and we find it fully developed in milk and dairy produce, the quantities varying according to the sunlight. The darker green plants like watercress have higher concentrations than the lighter green. The provitamin carotene is present in highest concentration in carrots.

Liver is a rich source of vitamin A, because this organ stores reserve supplies — but we must remember that our own livers do the same so it is not necessary to purloin one from another creature.

Vitamin A is associated with the growth of children, eyesight (R.A.F. Pilots were given carotene for night work), the skin, particularly the moist area; the respiratory tract, throat and bronchi.

Many vitamins, which are organic compounds, can be made synthetically and margarines are “fortified” with this kind of vitamin A.

Vitamin A is gradually destroyed by cooking, ultra-violet light and oxidation. Much of the vitamin is lost by the use of clear glass milk bottles, which should be dark brown like cod liver oil containers.

Vitamin B Group.

This now has tremendous ramifications and would need several chapters for an adequate description and the numerous constituents have different names in different countries.

Briefly : the vitamin B group is found chiefly in centres of growth and energy — the germs of grains and seeds (germination or sprouting increases the content), yeasts, and are vital for digestive processes, growth and the nervous system.

Vitamin B₁ (Thiamine).

Source : The germs of seeds, nuts, whole grain and pulses—mostly in the germ and scutellum hence milling leads to a deficiency. Yeast is a rich source but all the vitamin is not necessarily available in live cells taken orally. Wholemeal bread is desirable.

Properties : Activates nerves, adjusts blood pressure, and plays a part in the release of energy from carbohydrates. A deficiency may check growth, cause neuritis and general depression. Chronic conditions include beri-beri with the persistent use of milled cereals like rice in countries where it is the national staple food.

Processing and heating over 100°C destroys 50% or more. Antibiotics and sulphonamides or other "anti-vitamins" are also destructive.

Riboflavin (Vitamin B₂).

Source : Green leaves, yeast and micro-organisms, germinated seeds, malted barley, dairy product and cereals (whole).

Properties : It is a yellow substance soluble in water and is connected with energy chain processes. Deficiencies check the growth of children, give rise to sores in the corner of the mouth and on the tongue, effect the eyes. It is fairly stable in baking and normal storage conditions.

Nicotinic acid.

In contrast to other B vitamins relatively large quantities are required daily — there is no connection with tobacco and smoking will not help.

Source: Fairly evenly distributed in seeds and not confined to the germ. The usual whole cereals and pulses, yeast, milk, roasted peanuts, potatoes and other vegetables.

Properties: A link in the processes of conversion of energy from carbohydrates. Connected with growth which is retarded if deficient. Other deficiency symptoms are found in the skin which becomes rough and red, sore tongue, diarrhoea and forms of indigestion. Grave mental disturbances like dementia. Chronic cases develop pellagra.

Vitamin B₆ (Pyridoxine).

Source: This is widely distributed in vegetarian foods — yeast, wheat germ and smaller supplies in dairy produce, lettuce and spinach and many other foods.

Properties: Concerned in the growth of young animals, maintenance of the skin, protein and fatty acid metabolism. No deficiency symptoms have been detected but it is found in human milk and is therefore of physiological importance. It is sensitive to ultra-violet radiation.

Pantothenic acid (Vitamin B₃).

Source: Widely distributed and found in significant amounts in cereals, milk, yeast, and is found in all living tissues.

Properties: Has some influence in biological processes and is probably a factor in beri-beri and pellagra though human requirements have not yet been established. Experiments on rats (with which we do not agree), with a B₃ deficiency diet show greying of the hair, dermatitis and adrenal damage. It is sensitive to acid, alkali and heat.

Biotin (Vitamin H, Bioss II and co-enzyme R).

Source: Milk, vegetables, grains, seeds and nuts are good sources.

Properties: Necessary for the health of the skin. As the Extra Pharmacopeia so wittily puts it — "probably forms part of enzyme molecules concerned with the decarboxylation of oxalacetic acid, as in the synthesis of aspartic acid by fixation of carbon dioxide with pyruvate to form oxalacetate." We are inclined to agree. Deficiencies lead to dermatitis, lassitude, depression and loss of mental control.

Folic Acid (Vitamin M).

Source: Occurs in dark green leafy vegetables, yeast, lesser quantities in pale green leaves, cauliflowers, wheat, etc.

Properties: Found useful in helping to cure macrocytic anaemia, is connected with growth, blood development, protein utilization and various metabolic processes. Deficiency symptoms, tropical macrocytic anaemia, megaloblastic anaemia of infancy and pregnancy, and sprue. Deficiency is unlikely in a vegetarian diet, but on the other hand heavy supplementary doses can cause degeneration of the spinal cord.

Vitamin B₇ (p-Aminobenzoic Acid).

Source: Widely distributed in vegetation and yeast.

Properties: Associated with the previous vitamin and known as an anti-grey hair factor though clinical tests on human beings have given negative results. It is one of many substances for which the purpose is not really known.

Vitamin B₁₂

This is the latest discovery and is closely connected with pernicious anaemia. Unlike other vitamins it contains a metal, cobalt.

Source: The vitamin has not yet been identified in many foods though traces have been found in sprouted legumes and

peanuts. Mostly it is synthesized in the intestines by micro-organisms and is found in the liver of vegetarian animals so it is likely that we have the same propensity.

Properties: It prevents the onset of anaemia and improves the biological value of vegetable proteins, but being a potent factor may have many other functions. Deficiency symptoms were found in a number of vegans and it appears that dairy produce is helpful. Meat toxins are believed to inhibit the natural synthesis by microbial activity, so "a little meat" may be a danger rather than an excuse for not indulging much slaughtering.

Vitamin C (Ascorbic Acid).

Source: This is a vital vitamin and is found mainly in fruit and vegetables — milk has a small amount. Blackcurrants, Brussels sprouts, purple sprouting broccoli, watercress, oranges, lemons and rose hips head the list. Liver and fish have appreciable amounts, but since these are not eaten raw and cooking destroys the vitamin, they cannot be included.

Many other vegetables — parsley, kale, turnip tops, potatoes, cabbage, mint, broad beans, spring onions, etc., are good sources even if not as rich as rose hips and blackcurrants.

Properties: Prevents scurvy and is connected with the oxidation-reduction systems in living tissues. It occurs mainly in the blood's white cells though it is found practically everywhere. An insufficiency is indicated in ill-effects like the checking of children's growth, infection of the mouth and gums; bad healing.

It is soluble in water and quickly destroyed by light and heat. It is also lost in wilted vegetables and by grating and mincing which release an enzyme inimical to Vitamin C. Curiously enough, some animals which do not obtain the

vitamin from food, have the ability to manufacture it in digestive processes. Pasteurization of milk reduces the small amount of Vitamin C and boiling destroys it all. A milk bottle left on the doorsteps in sunlight for a short time will lose Vitamin C and Riboflavin.

Vitamins D₁, D₂ and D₃

These are associated with bone formation — calcium and phosphorus — are therefore important for young people and expectant mothers.

Source: Formed by photosynthesis from ergosterol and other provitamins. They can be obtained both from food and the action of ultraviolet light on the skin, hence the importance of sunbathing. Dairy produce is a good source and although orthodox chemists turn, as usual, to cod liver oil and fish, these are more likely to give an excess. Fungi and moulds are rich sources and they can be manufactured by irradiation of calciferol.

Properties: Prevents rickets and certain other bone diseases if adequate proportions of other minerals are also present. No doubt help in general resistance to disease. Not lost by ordinary cooking processes.

Vitamin E.

Source: Richest source is the germ of seeds, especially wheat germ and oats. Green leaves like turnip tops and rose hip seeds are good sources.

Properties: Acts as an antioxidant and protects other vitamins from destruction by rancidity agents. Deficiency shows in impaired growth in the embryo and young animal. There is no conclusive evidence that it effects fertility of human beings, but this may well be so.

Vitamin F.

Source : Oils, seed fats, soya and sunflower seed oils, lin seed, wheat germ oil, barley and cotton seed oils, etc., have large percentages.

Properties : Probably connected with the skin, ovulation and gestation. Virility in males. Helps in skin diseases, e.g., eczema.

Vitamin K.

Source : Isolated from lucerne and putrefying fish meal. But is found in green leaves, spinach, cabbage and cauliflower, nettle leaves and tomatoes, green peas, rose hips, etc. Can be synthesized by bacteria. Deficiency is very unlikely.

Properties : Essential for the clotting qualities of the blood and has, like all other vitamins, numerous minor functions.

Vitamin P.

Source : A new vitamin, about which there is some controversy, in the peel of citrus fruits and need not worry us a great deal as it is found in blackcurrants, lemons, oranges, prunes and rose hips ; apples, apricots, etc., and some vegetables and other substances have the same activity — rutin, etc.

Properties : Connected with capillary fragility and is helpful with bleeding of the retina. Probably has an influence on so-called virus diseases (influenza) in relation to the permeability of red blood cell walls.

In conclusion of this section, may we again state that all minerals and vitamins have their basic origin in the vegetable kingdom so far as nutritional purposes are concerned. It is not necessary to kill other creatures to obtain the supplies needed for health and well-being.

CHAPTER VIII

FOOD AND WORLD ECONOMICS

Food and World Economics: Competition between animals and man. Increasing populations. Vegetarianism the answer to world food problem. Food Production: effect and artificial fertilisers. The Cost of Food: comparative costs of flesh and vegetarian foods.

ALTHOUGH there is no doubt that food production can be greatly increased, better use made of the available land and distribution of surpluses made more equitable, the fact remains that meat production cannot be stepped up to keep pace with the increasing population.

Already there is competition between the human population and that of the meat-bearing animals; exporting countries are having to keep back more and more for their own purposes, and the food situation is causing grave concern to the Food and Agriculture Organization of the United Nations (F.A.O.).

Millions, according to F.A.O., are at present going short of food and year by year the position is worsening. "Moreover, Government plans do not offer any significant solution to these disparities. The under-fed are demanding again to improve their lot of food and the Agriculture Organization estimates that 70% of the world's population is ill-fed, and that the population is increasing at such a rate that there will be 100,000,000 more people to feed in the next two years — by 1956 — and a new approach must be adopted at once to meet the changed needs of the world and its output and distribution of food" (Mr. Norman Dodds of F.A.O.).

What has vegetarianism to offer in solution of the world food problem? First let us consider the following facts which will make vegetarianism inevitable.

By the end of this century, in 2,000 A.D., according to the experts, the world population will be between 4,000,000,000 and 5,000,000,000 — it will have doubled itself despite local wars and street accidents. It is a curious fact in nature that where there is malnutrition breeding is accelerated. A young oak tree, held back in growth for any reason, will throw out acorns many years before it should do so — well nourished human beings do not have as many children as the poor and undernourished. This in part may account for the alarming increases which are taking place, in addition to improved hygiene and lower mortality rates.

Though we may be able to do more with our land, the area of fertile ground or land capable of being made fertile is fairly rigid, and only on a tiny fraction of the earth's land surface, with its mountains, ice and unsuitable climates, is it possible to produce food. We saw in Africa recently, when the British Government tried unsuccessfully to devastate a jungle to grow peanuts, that opening up new country is not as simple in practice as it is in theory. In fact the rape of our forest covering has lowered the water table in nearly every country so that deserts are now forming. Richard St. Barbe Baker has stated that at least 10% of all land should be tree-bearing to maintain water levels and fertility by the constant production of humus. This minimum requirement is not being achieved to the contrary and the wood pulp industry for newspapers increases with the news-avid populations. This industry takes up millions of cubic feet of wood every day and bigger populations mean more building materials.

In Britain alone we are losing 50,000 acres of fertile land every year through building and industrial development —

this will also increase in ratio. In other parts of the world the problem is already more serious.

So we have a rapid and uncontrolled *increase* of people to feed, coupled with a *decrease* in fertile land, a decrease which cannot be kept pace with by opening up new territories.

Great efforts are being made to increase food production by the use of artificial fertilisers, and although chemicals, like wonder drugs, have a dramatic immediate effect, as a long term policy they are fatal. A 1952 report from Adelaide, by the Commonwealth Scientific and Industrial Research Organisation, claims that much of the Australian wheat belt may be undergoing a fertility decline of unsuspected seriousness. The officer in charge of the Organisation's Division of Mathematical Statistics said " That in the years between 1896 and 1941 the development of better varieties of wheat and the use of super phosphates had improved the wheat yield, *but this improvement was often a deceptive mask concealing a decline in soil fertility* because the nitrogen is extracted from the soil and this leads to soil erosion."

Over-cropping leads to dust bowls, disease-prone crops, and subsequent malnutrition of both cattle and humans.

Another method of increasing food production by Government authorities is to breed more cattle and pigs, but this is doomed to failure because cattle need about eight times more land for food and rearing than human beings, and only a small proportion of the food they eat comes back to us in the form of nutrition — an extremely uneconomic way of obtaining food. The cattle populations cannot be substantially increased where there is already competition for land.

Most of the fertile land devoted to cattle (they eat cereals, root and green crops and various oil bearing seeds for increased milk production) could be utilized for crops suitable for direct feeding to human beings, a much quicker and more economical method of obtaining food.

Comparative figures show that ten times more cereals can be grown in the same time than meat, weight for weight, and up to a hundred times more vegetables.

Furthermore it is estimated that there is about one acre of productive land per person available, and according to Sir John Russell, F.R.S. (late director of Rothamsted Experimental Station) 1.63 acres are necessary to support a man living on a mixed diet, whereas only .5 or .6 acres are required for a varied vegetarian diet. Of the 1.63 acres for a meateater 1.3 acres are needed solely to provide flesh foods.

Taking all these factors into consideration we see that vegetarianism is the logical solution to the world's food problem. Problems of storage and distribution would be simpler because expensive refrigeration is not necessary, and even an overcrowded country like Britain could be self-supporting in essential foodstuffs. A train journey through any part of the country reveals thousands of acres lying idle while waiting for grass to grow for cattle feeding, or being grazed by small herds. This land could grow enormous amounts of food with horticultural intensity. Every road verge and hedgerow could grow fruit and nuts. Even if vegetarianism is not looked upon with favour, it should be a Government policy to ensure supplies of foodstuffs in times of war — to rely on imports in times of peace and neglect to develop the possibilities of home food production is the height of folly.

Food Production.

The vegetarian is particularly interested in production because experience has shown that the biological value of food is extremely important.

Just as the chemist has contaminated food in processing so has he exerted his baneful influence on the growing of crops by forcing them with chemical nutrients connected with rapid growth. Since the advent of chemical fertilisers we have had

a tremendous increase in what are labelled "virus diseases" and many vegetables have lost their savour — potatoes are a typical example, hardly fit to eat. Vast areas where they are grown are riddled with eel-worm for chemicals disturb soil bacteria, kill natural predators and encourage pests. Earth-worms, the most valuable allies we have in the maintenance of soil fertility are killed and their nitrogenous activities are lost.

There is still much controversy on the subject. The chemical combines want to sell their wares and insist that no damage is done, while the reformer would like to see purely organic methods.

The truth probably lies somewhere between the two, for we cannot see why elements which are missing from certain areas, should not be substituted by earth elements from others. But there is a vast difference between digging up natural rock sediments, like chalk, and redistributing them, and using harmful products from coal-gas retorts (like sulphate of ammonia) and other powerful chemicals.

Plants only discriminate to a certain extent among the chemicals they absorb from the soil, and usually take up the most readily available for certain purposes. If they grow too quickly they do not have time to search out trace elements, and their structure becomes big and even of excellent appearance, without all the nutrients they should have. In this way they not only give us a not-100% food, but being weaker biologically, become more disease prone. This in turn leads the chemists to evolve ever more powerful insecticides and pest killers.

It is, therefore, essential to advocate organic methods which simulate a natural forest floor with adequate supplies of humus, the proper bacteria, and mycelium, for robust and fully nourished plants.

The cost of Food.

It is sometimes argued that a vegetarian diet is much more costly than an ordinary meat diet, but this is not so in actual practice.

Vegetarians do not, as is generally supposed, eat vast quantities of expensive vegetables, nuts and fruit. It is doubtful if they eat any more vegetables and fruit than are consumed in the average middle class household. Salads are an expensive item in the winter months, but even so the yearly meal budget of a vegetarian family should be considerably lower than a meat-eaters, and as meat becomes increasingly difficult to produce the margin will be even more marked.

Bearing in mind that the true value of food lies in its nutritive value the following comparisons will be of interest (H.M.S.O. figures).

COMPARATIVE FOOD VALUES OF EDIBLE PORTIONS.

<i>Foodstuff</i>	<i>% Water</i>	<i>% Protein</i>	<i>% Fat</i>	<i>Carbo.</i>	<i>Calories</i>
Sirloin	59	16	23	—	271
Steak (Stewing)	65	17	16	—	212
Mutton	64	16	19	—	235
Cheese	37	25	34	—	410
Peanuts	4	28	49	7.7	584
Brazils	8	14	61	3.7	624
Almonds	5	20	53	3.9	579
Lentils	6	29	—	48.0	287
Soya	7	40	23	13.3	426

We see that weight for weight meat is not the best source of nutrition and most of it is water, so we do not get good value for our money. From a purely financial angle we have to consider the cost of food materials. Take, for instance, the savoury part of a meal from which we get protein and fats.

ROJA. MUTHIAH

ARTIST

KOTTAIYUR P. O.

Comparative Costs per lb.

	s. d.	
Beef	4 0	A wide variety of vegetarian savouries with a higher nutritive value can be made with cheese, nuts, lentils and various vegetables at 2 per lb., sufficient for four people.
Steak	4 0	
Sausage	3 6	
Bacon	4 0	
Plaice	2 6	
Halibut	4 6	
Sole	4 0	
Ham	10 0	
Tongue	10 0	
Corned Beef	4 0	

The following prices were guaranteed to *producers* by the Government in 1955 and show the wide disparity of costs per ton :—

Wheat	... £31	Potatoes	... £12
Barley	... £26	Beef	... £133
Oats	... £24	Mutton	... £322
Rye	... £25	Pork and Bacon	£303
Beet	... £12		

Mrs. Isabel James, Secretary of The Vegetarian Catering Association and Proprietress of Rothay Bank Guest House, Grasmere, has compiled the following figures showing how one elderly person can obtain adequate nourishment on the low figure of 16 per week. (Summer 1956 approximate prices):—

	s. d.
6 ozs. Lentils (or beans) (4 meals)	.. 4½
6 ozs. Cheese (4 meals)	.. 1 3
2 Eggs (2 meals)	.. 9
4 ozs. Cashew Nuts (4 meals)	.. 1 3
8 ozs. Oatmeal (breakfasts)	.. 4
3½ pts. Milk (½ pint daily)	.. 2 0
3 lbs. Wholemeal Bread (or flour and yeast)	.. 1 11

	s.	d.
12 ozs. Margarine (Golden Seal 10% butter) ..	1	6
1 lb. Brown Sugar ..		8½
4 ozs. Dried Fruit ..		6
4 ozs. Treacle or Jam ..		4
Fresh fruit in season (e.g., ½ lb. apples, 1 orange, a few plums) ..	1	3
Fresh vegetables or salad (e.g., 1 lb. carrots, a small cabbage, ½ lb. tomatoes) ..	1	3
3 lbs. Potatoes ..		9
2 ozs. Tea ..		10
Towards other beverages — Cocoa, Marmite, etc., or Sundries ..	1	0
	<hr/>	
	16	0
	<hr/>	

A meat diet, then, is likely to be much more expensive, involves more shopping expeditions since meat and fish do not keep, while vegetarian protein staples keep well for months — here, too, is a saving in fares and shoe leather, to say nothing of the saving in medicines and aperients.

Cheese costs about 3|6d., nuts 6|- per lb. and may be considered dear, but only small quantities are used in savouries which have a cheap base of, say, lentils, beans and vegetables. It would not be an exaggeration to claim that a normal vegetarian diet is 33% cheaper, including slightly more fresh and dried fruit, and saladings (which in many cases can be home grown).

CHAPTER IX

AESTHETIC AND HUMANE ASPECTS

Aesthetic and Humane Considerations: Sensitivity and compassion attributes of human development. Facts and figures about slaughter.

SO far we have been dealing with material facts and, although really of secondary importance, for the basis of vegetarianism is ethical, they should logically bias us towards a fleshless diet.

Among the attributes of human development are sensitivity and compassionate feeling. The suppression of these finer qualities is unnatural. No one with any sensitivity would willingly live in the reeking atmosphere of a slaughter-house and bludgeon life-loving creatures to death. If everyone had to do their own killing few would eat meat. The severing of the jugular vein immediately after stunning, often with the animal thrashing about in death throes, and subsequent disembowelling of the still warm carcass is gruesome, to say the least. Killing cannot but breed callousness and irreverence for life — if we eat meat we condemn some men to a degrading occupation and share, as accessories, the crime of unnecessary beastliness.

It should not be thought that animals go meekly and willingly into the death chambers — they are filled with terror and resist strongly, often after long and exhausting journeys by rail, and road, arriving half starved and injured. All highly developed animals, like horses and cows are terrified by the smell of blood, and quite savage blows are necessary to make them enter a slaughterhouse. Pigs and sheep are often picked up by their necks and tails and thrown bodily — this treatment can even be witnessed in country markets.

The Jewish Kosher method, claimed by the Jews to be more humane than stunning with a "humane killer," is nevertheless revolting as the animal is manoeuvred into a

metal cage (in the more up-to-date abattoirs) which turns over on its side. The Rabbi makes the ceremonial knife cut which in theory severs the windpipe and jugular vein with one quick incision. In practice the animal may sometimes take up to 3 or 4 minutes to die, and who knows what conscious agony a creature may suffer even if dead to the outside world.

In *A Vegetarian Looks at the World*, Peter Freeman, gave the following estimates of animals slaughtered in one way or another every year:—

ANNUAL WORLD SLAUGHTER

Animal, etc.	Number Killed or injured Annually.*	Method of Killing.
Cows, Heifers, Horses, Ponies, Foals.	200,000,000	Probably less than 5% killed by humane slaughter.
SHEEP—Lambs, Rams, Ewes.	400,000,000	Mostly pole-axed as above.
PIGS.—Sows, Boars, etc.	200,000,000	Throats cut, or by mechanical killers.
RABBITS.—	1,000,000,000	Trapped or shot; some gassed.
BIRDS.—Poultry, Hens and Cocks, Chickens, Geese, Ducks Pheasants, Swans, Turkeys, etc.	2,000,000,000	Necks twisted and broken.
SMALLER BIRDS.—	1,000,000,000	Shooting and netting.
FISHES AND REPTILES.—	10,000,000,000	Mostly by nets, and left to die.
VIVISECTION.—	20,000,000	Probably less than a million with any anaesthetic.
FURS AND SKIN.—	20,000,000	Trapped in most cases and left to die.
HUNTING.—Lions, Tigers, Foxes, Deer, Otters, etc.	1,000,000	Shooting and trapping.

*The injured Animal often suffers much more than those killed outright. It is generally left to struggle by itself—crippled, maimed, diseased, injured for the rest of its life without aid or respite! Most of these animals are also killed or exploited in the prime of life—often leaving their young unprotected and helpless as well. Very young or very old animals or birds are useless for the purposes of mans exploitation.

Contemplating these astronomical figures makes us realise what a hell on earth we have made for animal life. Small wonder they fear us after ages of brutality. As the sun rises every day a belt of bloodletting moves across the world and millions of animals and birds are tortured and killed for food, sport and research.

While not wishing to be unpleasant it must be stated that an ordinary meateating home has a definite odour, not only from the larder but from cooking. With a vegetarian diet visitors frequently remark on the delightful atmosphere. Cooking operations have none of the offensive grease which lines the oven and makes "washing up" an unpleasant task.

Consider also, the extremely unpleasant tasks of skinning rabbits, disembowelling birds and slicing up the bloody tissues of a dead animal — the red tissues were once part of a wonderful organism giving mobility to a life-loving creature.

CHAPTER X

THE PURPOSE OF LIFE

*The Purpose of Life : Evidence of mystics and visionaries.
The development of conscious awareness. Life force and
cycles of life. The moral sense. The choice of co-operating
with nature.*

IN our opening chapters we touched on physical evolution and our kinship with animal life from an anatomical point of view.

Most of us would agree that we are not simply physical animals but have a controlling life-force, which we call a soul or spirit (the label does not matter). Let us, therefore, consider a different aspect of evolving life.

Mystics and visionaries, the spiritual investigating counterparts of anthropologists and archaeologists, have postulated the moral and spiritual evolution of man, and of course, it is not difficult to observe a mental, moral and spiritual scale of consciousness from barbarism to its antithesis, civilisation ; a graduated scale from practically nothing to moving animals and saints, similar in degrees as the span from cells to human bodies.

The word "conscious," if we refer to a dictionary, means an awareness of external stimuli. We can therefore ascribe the term to even the mineral kingdom since atoms make responses to the proximity of other atoms : heat, magnetism and pressure. Consciousness (awareness of external stimuli) is found in a more sensitive form in the plant and animal kingdoms — all through Nature we find form and consciousness running parallel. If we desire a more complete understand-

ing of life we must try to integrate the findings of science with the mysteries of consciousness.

Though it is difficult, if not impossible, to prove in scientific terms, and there is no reason why we should attempt to do so since we are dealing with a different set of facts comprehended with different faculties, we can be fairly certain that human beings, and all living things, and even *apparently* inert mineral substances, are something more than a collection of chemicals. We do not need the help of science or religion to know that our bodies are under the control of a thinking entity — a consciousness, life-force, spirit, soul, whatever we may call it.

While, to the analytical chemist our bodies are identical whether dead or alive — (at least before putrefaction or decay sets in) there can be no real doubt in our minds that they are not the same when conditions make it impossible for the life-force to operate at what we call death. Collections of chemicals do not walk about, talk, think and reproduce themselves. Our point is that everything in or on the earth shares this mysterious life-force in different states of manifestation.

If it is thought that this is a big claim to make, it should be remembered that much of the "scientific knowledge" scientists have to-day is based on deduction rather than absolute truth. Even the dating of geological strata is conjectural; it is only an assumption that the speed of light is constant outside the solar magnetic sphere, and possibly one of the reasons why the universe appears to be expanding. It is an axiom that scientific history is littered with discarded hypotheses, so the scientist must allow us a similar latitude when we assert that man is body and soul even when we do not limit this dual quality to human beings. If the physical forms are similar, as Professor le Gros Clark has stated, why not the controlling entities ?

To live usefully and with interest we need a philosophy of life based on reasoning. It is much more satisfying to build

our own philosophical outlook than to borrow one perhaps more applicable to a bygone age. Religious fervour can be misleading because emotional thinking is unreasonable. So let us take these two discernable and parallel streams of evolution and see if we cannot find implications for a pattern of life.

The Dominant Life-Force.

To summarise ; we have :—

1. The outward physical form which grows and changes, and
2. The inner life which appears to grow in consciousness and spiritual qualities.

From our own experience we can see that the outward form is, within the limitations of its capabilities, under the control of our minds which are part of the consciousness and which use the brain organ to transmit messages. For example : we can cause our arms to lift, our legs to walk ; the body also responds to emotions, and wrong mental states are known to cause disease (e.g., disharmony among the cells forming the body). We cannot logically limit this power of control to human beings only, since animals have similar mechanisms. We even know that minerals and their atoms are in an intense state of motion with electrons rotating at incredible speeds round the positive nucleus of every atom. The magnetic charge, another name for the life-force, holds the elements in place the release of this life-force has given scientists the atom bomb, so we cannot doubt its existence.

We can therefore postulate that everything has life, a primal force quite distinct from the form it shapes and controls. Chemicals put together with the greatest possible cunning do not spring into the form of a flower, bear seeds and reproduce the species.

Again, we can trace ever more sensitive manifestations of this life from relatively inert particles to radio-active elements ; from a tiny speck of simple cells to an oak tree : from the rudimentary amoeba to present day man with his enormous brain power and spiritual potentialities — a truly amazing and majestic panorama filling the mind with awe and reverence at the mighty conception and execution of such a plan. For no one in his right mind could conceive the universe and all its natural laws to be the result of unpremeditated chaos. Though we must join the honest agnostic and concede that we cannot explain the cause — even though we see the effect.

Another conclusion, distinct from that of biologists, is that a spiritual evolution is taking place continuously, and although we are too close to history to see the upward trend in ourselves, in fact human behaviour sometimes makes us doubt the possibility, we can with our finite knowledge of the past, be aware of a rise from limited animal instincts to advanced reasoning powers.

Just as physical evolution needs an elementary starting point in a few basic cells, so, if we accept the spiritual evolutionary hypothesis, must we infer a humble inception in a form suited to its capabilities. What more logical conclusion than that they both start together and climb the scale in symbiosis ?

The life-force which operates the amoeba could hardly manipulate the complicated mechanism of a bird, while a horse would not be able to use the sensitive hands of a musician or artist. The inference being that both streams of evolution keep pace, the diversity of forms being adapted to the needs of the evolving spirit — let us remember that we have concluded that it is the inner spirit exerting control on the outer form, and probably causing the mutations and genetic diver-

sions to meet its growing power of self-expression — not *vice versa*.

The Wheels of Life.

At this point we must take into consideration another set of closely related circumstances presented in the two ceaselessly moving wheels of creation and disappearance. On the one hand we have the physical cycle of substance being drawn from the mineral kingdom into the forms of vegetation; then through the processes of metabolism into the forms of animals, which die and allow the outer forms to return to the earth to begin the cycle all over again. Similarly the spirit part of us seems to appear and disappear. If we were to take two hoops and overlap them very slightly a line between the points of intersection might be said to represent the period we call life. We know what happens to the lower physical hoop, but what happens to the spirit hoop beyond the life period is not so certain.

This upper round of existence is the legitimate province of mystics and visionaries, for if all life-force proceeds from a primal centre, and we do not see how it could be otherwise, it is within the bounds of probability that there is a tenuous etheric link between the terminal spirit and the source in just the same way as we have a blood link with primitive physical forms. This is logical and reasonable, and certainly no wilder than many scientific theories. The religious idea of prayer is based on the possibility of communion with this source, which is sometimes called God, Brahma, or the Great Spirit, but these terms need not confuse our search for the mechanism. The fact remains that we all have a mysterious urge to know (again) perfection, and we cannot be aware of perfection without previous experience.

Plato said, we remember, that visionaries are those who can go beyond the cave of existence, see the real world and

bring back a description of life as it really is — and not as we believe it to be from a contemplation of the shadows we ourselves cast on the walls of our cave.

We have reached the evolutionary stage when fascinating powers are unfolding within us — psychic faculties, telepathy, mediumistic contact with life beyond the physical round; people are developing extra-sensory perceptions. There is never smoke without fire, so we should not behave like ostriches and ignore new experience and the mounting evidence of the persistence of the life-force after its brief tenure of a physical form.

What then do the pioneers in super-physical realms tell us? That the life-force is indestructible and when a certain polarity or individualization is achieved in lower physical forms (as distinct from the relatively undifferentiated spirit in the mineral and vegetable kingdoms) it moves from life to life, using different vehicles of expression and climbing the path of worldly existence until there are no more lessons for it to learn in such a sphere.

This doctrine has been accepted for thousands of years in the East and has been taught by most of the great spiritual leaders of mankind before analytical science was thought of. However, the idea of reincarnation may be new to some, and while it may conflict with what we have been conditioned to think from childhood, if given reasonable thought, would appear to offer a rational explanation of human behaviour and such phenomena as infant prodigies, inexplicable antipathies and affinities, to say nothing of memories of other lives which have come to many.

It is also a much more reasonable explanation of the graduated scale of consciousness we have been examining than the one we have inherited from Western orthodoxy — the pointless birth and death of animals put into the world for the purpose of being eaten, exploited and killed for pleasure.

The Purpose of Life.

We must first admit that life processes, birth and death, will go on supremely indifferent to what we think about them — they have been doing so for millions of years. Yet we reach a point when the matter becomes more than of academic interest. We are plagued with a sense of moral values and principles become important. We want to understand the purpose of life and something of its mechanism so that we can co-operate harmoniously and attain the full stature of man and womanhood.

What really distinguishes us from the lower orders of creation is this moral sense of what is right and wrong, or more accurately, a sense for the better choice acquired empirically. If we examine our lives closely we find they consist of a series of choices (some conscious, others unconscious and without due thought). Within certain circumstantial limits we have perfect freedom to make them.

No one, for instance, makes us kill other people with atom-bombs. It is a personal choice, and whether it is better to kill than be killed is also a choice. No one makes us continue to eat the flesh of dead animals and turn our stomachs into cemeteries. Whatever we do sets in motion a chain of subsequent events and different sets of choices. Wisdom of choice is something we gain from experience of the chain-reactions of bad choices. So the wise man makes his choices with care, and like a chess player sees the chain-reaction in advance — this is a simple explanation of the *modus operandi* of the moral sense.

We do not think the reality of our dual modes of evolution can be disputed even if the *raison d'être* may be controversial. Few of us would hesitate to affirm that the purpose of human life is to grow spiritually. If we accept this for ourselves then we must share it with all other living things. We are brought back to the fundamental choice of co-operating with nature,

helping less fortunate beings than ourselves ; guarding them from hurtful experiences unlikely to help them in their ascent, or doing the opposite.

Is it co-operation to interrupt the life cycle of a highly developed creature like a cow or horse many years before it would die naturally and cause pain and fear unnecessarily, especially when meat is unnecessary for human nutrition ? We have perfect freedom to make this choice even though it may be difficult. Can we — in the light of what may well be true — afford to shirk the responsibility of making such choices ? The chain-reactions of cruelty, greed and exploitation are fairly well known. The *sequelae* of cannibalism and parasitism are disease, and in the case of human beings, devolution, for flesheating is a habit for those who know no better.

No better conclusion springs to mind than Professor le Gros Clark's own final paragraph in *History of the Primates*. "If man has gained his intellectual dominance over his fellow creatures by concentrating his evolutionary energies on the development of his brain, it remains to be seen whether he can now maintain his position by contriving a method of living in orderly relations with members of his own species. If he fails to do so, he may yet follow the example of many other groups of animals who have achieved a temporary ascendancy by exaggerated development of some particular structural mechanism. He may become extinct."

We must go beyond relationships with our own species, and include all living things.

CHAPTER XI

NECESSITY FOR VEGETARIANISM

The Necessity for Vegetarianism: Review of essential teachings of Confucius, Lao Tze, Hinduism, Buddhism. The unity of life. What meat-eating involves. The advantages of vegetarianism.

ANY mode of living, religion, or philosophy, which does not include vegetarianism as a basic principle or as a first practical step towards physical, mental, and spiritual regeneration is, to make a dogmatic and controversial statement, a waste of time and nullifies human aspiration. Vegetarianism is the least and the first practical step which must be taken by anyone desiring to put his "house in order."

Most of the great leaders and teachers of mankind in intellectual spheres have worked from a simple truth, often capable of being stated in a few words. They have sought to apply it to as many different aspects of life as possible, or as they felt inclined having due regard for contemporary outlook.

Confucius, for instance, seized on the law of Reciprocity, known as the Chinese *Golden Rule* of "What you do not want done to yourself, do not do to others" — one of the many age-old maxims which have found their way into the Christian symposium — this was the truth he worked from.

Lao Tze, at about the same time as Confucius, Buddha, Mahavira, Isaiah and Zoroaster, who were teaching elsewhere, expounded Taoism in *The Tao Te King* which taught the unity of life . . . to achieve perfection we have "to be in unison with Tao" — in harmony with life. A very simple statement capable of illumining every aspect of life.

Ahimsa, or harmlessness, was the core of Buddhist ethical philosophy. Hinduism, shorn of its caste system (against which Buddhism was a reaction), its polytheism and pantheism, had the central conception of one absolute, all embracing spirit — Brahma, the one and only reality. Again, a simple basis from which to look outwards.

Zoroastrianism and Jainism acknowledged the sacredness of life long before the advent of Christ, the essence of whose teaching was love manifested as compassion.

Nearly 4,000 years ago, Akhenaton, the Egyptian Pharaoh, revolted against priestcraft and established a solar theology with a strong love for all living things. The following hymn of Akhenaton brings an echo down the centuries :

All cattle rest upon their pasturage,
The trees and plants flourish,
The birds flutter in their marshes
Their wings uplifted in adoration of Thee.
All the sheep dance upon their feet,
All winged things fly
They live when Thou hast shone upon them.

such appreciation of nature making us wonder if there has been any great advance since those times.

THE accretions of dogma, priestcraft, intellectualism and magical formulae (like bread and wine being supernaturally turned into the body and blood of Christ, miracles, resurrections and the phenomena of virgin births, which have been attributed to many other "messengers" as well as Christ), tend to obliterate the simple truths which formed the original theses. It should be also remembered that the applications of the central ideas were not necessarily fully extended owing to the limitations of human nature, and the exponents at those particular times.

Confucius limited the application of his maxim to social and government behaviour, not seeing or declining to see, that the creature kingdom is an integral part of the pattern of life equally deserving of courteous treatment. Orthodox Christianity has the same limitation. Buddhists choose to ignore the possibility of a Godhead, concentrating downwards into negativating the outer life as a means of achieving a particular brand of Nirvana.

However, it is not necessary to be a publicly acclaimed leader, or to follow any organised religion or philosophy in order to acquire a modicum of harmony. Indeed in following an organised way of life or thinking pattern created by someone else, there are always the grave dangers of "founder worship," emotionalism (accepting wild hypotheses because someone stated they were true), and the atrophy of our own powers of intuition and reasoning. Organised religions with "written authorities" are static, cannot move with the times and adjust themselves to changing conditions; the priesthood and leadership are liable to become vested interests either from pride, power or position; there is often an unhealthy antagonism to other and perhaps better points of view.

It is far better to do our own thinking and reasoning from a given basis, which can be of our own making or borrowed from an enlightened source and adapted to meet our own particular circumstances. But it is the core of a philosophy or religion which is of value — not the embellishments.

We may decide that "love" or "unity of life" offer good scope for influence on behaviour. There is no reason why, if we need mental props to sustain our efforts, we should not have at the back of our minds a belief in life after death, future lives, a personal or an omniscient God. For whatever we think about these things does not alter the facts of the *modus operandi* of birth, death, growth and decay, or whether we were created as a speck of primordial jelly by a Divine

Intelligence or by-passed evolution by suddenly appearing in an edenic garden. These things are of academic interest only and an enwrapment contemplation of them leads to neuroses and an unhealthy escapism.

Even if we look upwards we must have our feet planted firmly on the ground. We are here and must grapple with the conditions in which we live. This can only be done by adhering to high principles and living them. This, we think, is more conducive to health on all planes than hoping beneficent beings are floating around in the atmosphere to develop our characters and protect us from the due consequences of our own stupidity.

We may have psychic experiences, we may glimpse or commune with other kinds of beings. Even so, however helpful these experiences or illusions may be, we still have to live here and now. We have the freedom to decide how we shall live, and how we live is the measure of our spiritual stature—not the high principles we think about and subscribe to, but the measure in which they are part of our lives.

IT may seem bold to assert that vegetarianism must be a basic part of any useful system of living, but let us consider the following points :

Meat eating involves :

1. The brutal and unnecessary slaughter of millions of highly sensitive creatures every day of the year, it includes the ghastly butchery by throat-slitting and braining, making the earth a hell for the majority of the world's more highly developed creatures. The human stomach becomes an animal cemetery, receiving the partly cremated portions of dead animals instead of health ensuring nutrition.

2. The perpetuation of thoughtless, selfish greed, in those who insist on the flesh of specially murdered animals, for killing animals unnecessarily is selfish.
3. The degradation to callous brutality of those whose job it is to crush out the life of meat-bearing animals . . . doing the dirty work of those who resolutely shut their minds and hearts to the fact that they are devouring the organs and muscles of a creature which once experienced fear, agony, and mother love, and which would still be enjoying life, were it not killed and dissected.
4. The poisoning of the human blood-stream by absorption of putrefactory matter in a system specially adapted for metabolism through processes of fermentation — to the detriment of other vital functions.
5. The subsequent dulling of the intellect not only through chemical poisoning, but through suppressing intuitive reasoning and the subjugation of compassionate feeling, which are among the finer qualities of man and womanhood.
6. The inevitable spread of disease with the parallel rise of drug and serum therapy, again involving the creatures in pain and distress through vivisection by the devilish practices of animal experimentation—another utterly selfish pursuit.
7. Disruption of world economy because the total acreage of fertile land will not support a meat eating community. Those who eat flesh ensure that a similar number of people will live on a starvation level in another part of the world. This leads to war as assuredly as armed aggression.
8. A denial of the right of all living creatures to develop in their own way.

It will be seen, therefore, that any philosophy based on an obviously vicious and parasitic way of life has little value in moral advancement, and is, moreover a definite obstacle in the way of its development — the complete antithesis of what Dr. Albert Schweitzer calls a “reverence for life” and which this great man considers to be essential.

Advantages of Vegetarianism :

1. Acknowledges the sacredness of all life and releases the creatures from the pain and fear inseparable from slaughter. This in itself, without the scientific evidence of the efficacy of vegetarianism, should be sufficient to convince anyone that meateating is wrong in principle.
2. Removes a conscious or subconscious guilt complex which, by its very nature, is bound to have repercussions on health and behaviour.
3. Removes the necessity for some unfortunate fellow-men to follow a beastly and ignoble trade.
4. Gives more opportunity to enjoy good health by reverting to what was quite recently our revolutionary method of obtaining nutrition.
5. Enhances thinking processes by clarifying the brain, which like any other human organ, needs adequate nutrition free from deleterious substances.
6. Not being of a stimulative nature, like flesh foods, reduces physical lust and the desire for other stimulants and narcotics.
7. Reduces the need for orthodox medical treatments and the supposed need for vivisection and wonder drugs.
8. Ensures sounder, disease-free bodies for succeeding generations, providing more sensitive physical equip-

ment. (Here again a moral consideration of some importance).

9. Removes a possible cause of bad international relationships and a potent factor in war causation.
10. Fosters the growth of moral responsibility and this surely is one of the real purposes of life.

Living on this basis is obviously sounder from every point of view. Therefore, it is with confidence that we repeat, "any way of life which does not include vegetarianism as a fundamental precept is a waste of time." The foundations of any edifice must be built on firm ground if the structure is to endure and have any functional value.

CHAPTER XII

CHRISTIANITY AND VEGETARIANISM

Christianity and Vegetarianism: How Christians can find justification for vegetarianism in the Old Testament. Special section on The Master and Vegetarianism by the late Rev. V. Holmes-Gore.

VEGETARIANISM is not based on the Bible, but it frequently happens at lectures, that having presented the scientific health and ethical aspects of vegetarianism, a member of the audience will jettison our arguments and sweep away humanitarian and compassionate considerations by quoting passages from the Bible which favour flesh-eating.

Our object is not, therefore, to justify our way of life by recouse to the Bible, but to show that when Christians become so minded, they will find in their Scriptures a far greater justification for vegetarianism than for flesh-eating.

At one time, not so very long ago, slavery, women and children working in coal-mines, capital punishment for petty thieving, public hangings and witch burning, cock fighting and bear baiting, were accepted as right. Even the Church believed in torture and threat of execution as means towards conversion.

The duplicity of Abraham over Sarah, Jacob and Easu ; the thefts of Israel from the Egyptians ; the murders committed by Abraham in intention ; by Moses and Jael, Keptha and Elijah in fact ; the polygamy of Abraham, Jacob, David and Solomon ; the many wars and cruelties meted out to captured

enemies and so on might be quoted to justify such practices to-day, but why is it that what appeared right for one age is wrong for another? Surely, because we are evolving along more sensitive lines, and our understanding of moral values is growing.

The process is still going on, and we can suppose that many present day practices will become distasteful to future generations — such things as obliterating mankind with explosives; poisoning food with chemicals and, we would add, the slaughtering of innocent sentient creatures for food. For we already know that meat is not necessary for either health or long life.

So we see that even if some passages in the Bible do appear to justify slaughter, it is not a valid reason for remaining in a morally barbaric state of development. Dipsomaniacs can point out that Jesus drank wine; if we wish to continue eating dead animals and perpetuate the beastliness of the slaughter-house we can cling to the authority of the Bible. There is a personal choice — we can be the last to let go of an evil habit, or we can be in the forefront of those pioneers who lead the way to better things. Remember the Suffragettes who saw that women were held in an unjustifiable position in life; the Tolpuddle martyrs who believed that labourers had basic rights: the people who protested against and abolished slavery and child labour. All down the ages we find little groups of pioneers who saw the next step and devoted their lives to the advancement of humanity; the early Christians, including Christ himself, took their lives in their hands to propagate a teaching of love and compassion, protesting against animal sacrifices and the oppression of Rome—they did not feel bound by ancient tradition, priestcraft and the written word. We ourselves are in a similar position to-day. We can continue in the easy rut of tradition or we can begin to apply higher moral conceptions to everyday life.

Quotations against Flesh-eating.

If the Old Testament only advocated flesh-eating there might be some slight justification for continuing the practice ; but this is far from the case. Vegetarianism is not only indicated but actually demanded — even with a literal word for word acceptance.

“Thou shalt not kill” may be said to apply to human beings, though it is not qualified, and a recent change to “Thou shalt do no murder” makes its application more precise ; but other Divine commands are less equivocal “Thou shalt not eat any blood,” and in Leviticus (chap. iii v. 17) it says : “It shall be a perpetual statute throughout your generations in all your dwellings, that ye shall eat neither fat nor blood.” This too is quite definite and further (chap. vii v. 23) “Ye shall eat no fat, of ox, or sheep or goat. And the fat of that which dieth of itself, and the fat of that which is torn of beasts, may be used for any other service : but ye shall in no wise eat of it.” In the same chapter it says : “For whosoever eateth the fat of the beast, of which men offer an offering made by fire unto the Lord, *even the soul* that eateth it shall be cut off from his people. And ye shall eat no manner of blood, whether it be of fowl or of beast, in any of your dwellings.” There are many similar verses. Kosher killing, with ceremonial throat cutting and blood-letting is the merest sophistry to circumvent these instructions, for not all the blood of an animal can be drained from its arteries and the use of only the fore and hind quarters does not avoid the fat.

Let us go back to Genesis. “And God said : let the earth bring forth grass, the herb yielding seed and fruit tree yielding fruit after his kind, whose seed is in itself, upon the earth —and it was so. And the earth brought forth grass, and herb yielding seed after his kind and the tree yielding fruit, whose seed was in itself, after its kind ; and God saw that it was good. And God said : Behold I have given you every herb

bearing seed which is upon the face of all the earth and every tree in the which is the fruit of a tree yielding seed ; *to you it shall be for meat, and to every beast of the earth, and every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat*” (chap. i verses 29, 30).

What could be more vegetarian ? If we find contradictory passages we can only make our own moral choice for it is not unreasonable to suppose that the Scriptures were selected so that the “weaker brethren” would be included in the Christian fold. Indeed, official Church histories admit that editing took place as late as the fourth century at the Council of Nicea, when the Roman Emperor Constantine accepted a form of Christianity which enabled him to continue traditional Roman life.

Emphasis on Vegetarian Food.

While we are aware that there are many references to meat and its preparation, instances against eating certain animals in Exodus, Leviticus, Numbers, Deuteronomy, Joshua, Judges, Ruth, Samuel i and ii, there are continuous references to food and the things suitable for food. They include : bread, unleavened bread with olive oil, pottage, milk and honey, manna, olives, fruit, fine flour, grapes, cucumbers, melons, leeks, onions, garlic, coriander seed, pomegranates, figs, raisins, wheat, barley, corn, water, vinegar, wine, meal, beans, lentils and pulses.

When the children of Isreal lusted after flesh — note the term “lusted” — it was said that they should eat it for a whole month “until it comes out at your nostrils, and it be loathsome unto you” (Num. chap. xi verses 20 and 33). “While the flesh was yet between their teeth, ere it was chewed the wrath of the Lord was kindled against the people, and the Lord smote the people with a very great plague.”

The emphasis through all these Books is on vegetarian food — fleshfoods are often mentioned with loathing. Riches and rewards are expressed in terms of milk and honey, not the pitiful parts and organs of dead animals. “Thy shoots are an orchard of pomegranates ; with precious fruits, henna with spikenard plants, spikenard and saffron, calamus and cinnamon, with all trees of frankincense, myrrh and aloes with all the chief spices ” we find in the Song of Solomon — fruits, flowers, vines and nuts to illustrate the Divine bounty.

In Isaiah (chap. i, v. 11) “To what purpose is the multitude of your sacrifices unto Me ? Saith the Lord : I am full of the burnt offerings of rams, and the fat of fed beasts ; and I delight not in the blood of bullocks, or of lambs, or of he goats . . . bring no more vain oblations . . . your new moons and your appointed feasts my soul hateth ; . . . and when ye spread forth your hands, I will hide mine eyes from you, yea, when ye make many prayers, I will not hear ; your hands are full of blood.”

Isaiah’s prophesy was that “the wolf shall dwell with the lamb and the leopard shall lie down with the kid . . . they shall not hurt nor destroy in all my holy mountain,” Not a far-fetched vision but a state of affairs which could be attained by the application of love and kindness. We all know of examples of cats and dogs, foxes and squirrels and many other animals living together in complete harmony under the guardianship of animal lovers. There is no reason why, as our understanding of the purpose of life deepens and our sense of moral responsibility expands, Isaiah’s vision will not come true.

In chap. lxvi, verse 3, it says : “He that killeth an ox is as he that slayeth a man ; he that sacrificeth a lamb, as he that breaketh a dog’s neck ; he that offereth an oblation, as he that offereth swine’s blood . . . yea they have chosen their own ways, and their soul delighteth in their abominations.”

We also remember the story in Daniel where four princes of Israel were brought before Nebuchadnezza, who appointed for them a daily portion of his meat and wine. But they refused to defile themselves with meat and wine and suggested that a test should be made by feeding them for ten days with pulses and water, comparing them with other youths fed on the king's meat and wine. "And at the end of ten days their countenances appeared fairer, and they were fatter in flesh than all the youths which did eat of the king's meat." The value of a vegetarian diet was known even in those days. It can be stated that the Old Testament is predominantly inclined towards vegetarianism.

Early Christian Fathers.

Many of the early Christian Fathers not only practised and advocated vegetarianism on aesthetic and spiritual grounds but were extremely outspoken to their fellow Christians who hankered after the flesh-pots. This is what Tertullian had to say — "How unworthily do you press the example of Christ as having come eating and drinking *into the service of your lusts*: I think that He who pronounced not the full but the hungry and thirsty 'Blessed,' who professed His work to be the completion of His Father's Will, I think that he was wont to abstain, instructing them to labour for that 'Meat' which lasts to eternal life, and enjoying in their common prayers petition, not for rich and gross food but for bread only" — by which it is seen that Tertullian was also faced with the problem of meat eating. He was provoked to saying "Your belly is your God, your liver is your temple, your paunch is your altar, the cook is your priest, and the fat steam is your Holy Spirit. The seasonings and the sauces are your chrisms and your eructations are your prophesyings."

In the Clementine Homilies of the middle of the second century founded on the preaching of St. Peter who was an

intimate of the Master, we have : "The unnatural eating of flesh-meats is as polluting as the heathen worship of devils, with its sacrifices and its unpure feasts, through participation in which a man becomes a fellow-eater with devils." It is interesting to note here that all esoteric doctrines state quite emphatically that the use of flesh-food impairs the faculty of intuition and cuts, the soul off from communion with spiritual spheres.

Clement of Alexandria, the finest philosopher of his time, wrote "Those who use the most frugal fare are the strongest, the healthiest and the noblest . . . we must guard against those sorts of food which persuade us to eat when we are not hungry . . . For is there not, within a temperate simplicity, a wholesome variety of eatables — vegetables, roots, olives, herbs, milk, cheese, fruits and all kinds of dry food . . . those who bend around inflammatory tables, *nourishing their own diseases* (the deleterious effect of meat-eating was known) are ruled by a most licentious disease which I shall venture to call the demon of the belly . . . happiness is found only in the practice of virtue. Accordingly the Apostle Matthew lived upon seeds and nuts, hard shelled fruits and vegetables, without the use of flesh."

Now in this quotation we again have a pointer to the habits of diet of those closest to Christ. It can be assumed that Peter and Matthew were vegetarians. Hegesippus stated that James (supposed by some to be the Lord's brother) was holy from his birth drank no wine and ate no flesh — it is unlikely therefore that the rest of his family were meateaters. John the Baptist was an ascetic of the hermit type and lived on the simple fare of locust beans and wild honey.

The Master Himself is known to have been a Nazarene — the name of a pre-Christian sect of Syrian Jews similar to the Essenes, which were mentioned by Pliny and Epiphanius and kept strictly to the Laws of Moses which, of course, included

“Thou shalt not kill.” The inner orders of the Nazarenes and Essenes abstained from alcoholic drinks and flesh-meats. The Nazarenes wore their hair long and did not shave, and clothed themselves in a single seamless garment; and Christ is traditionally depicted in this garb. “Essene means bather, so to be baptized also implies initiation into the sect. The *Dead Sea Scrolls* are of particular interest since light is thrown on the immediate background of the Master.

Implications of Christianity.

If we were to summarize Christ's teaching into a few words we should have love and compassion; justice and charity. We are, therefore, if we wish to become practising Christians, confronted with the task of interpreting these things into our daily lives. We must ask ourselves if the horrors of the slaughterhouse, trapping wild animals for fur and food, torturing defenceless animals in vivisection laboratories and many other abominations we inflict on the animal kingdom, are in keeping with love and compassion.

It may help us to understand many of the obviously allegorical stories in the Bible from Hebrew literature to know that they were largely influenced by Egyptian methods of presentation (Moses was brought up as a Royal Egyptian). They used symbols, glyphs and heiroglyphs. Animals were used to represent Gods and soul initiations — places to represent states of spiritual unfoldment — and so on. In the Bible we have the same kind of symbolism — the Lamb of God, the dove of peace; the four beasts in Ezekiel and Revelation; even the four Gospels have their symbols: the Lion of St. Mark, the Angel (or man) of St. Matthew, the Eagle of St. John and the Ox of St. Luke. Astrology too played a large part in the life of the people in those days; every Royal Court had its astrologers and soothsayers, consequently the Ox (Taurus) and Fishes (Pisces) may have been used in an esoteric way.

However we interpret the Biblical stories, one thing is certain ; the picture of a Son of God, Holy, Divinely compassionate with a knife in His hand, cutting the throats of life-loving creatures, is completely contradictory. "The letter is dead and killeth — but the Spirit alone hath and giveth life."

Was The Master a Vegetarian ?

The New Testament, of course, is a special problem since the Master is clearly depicted as a fish-eater and not adverse to meat-eating.

The late Rev. V. A. Holmes-Gore, prepared for the author a special article (first published in *World Forum Autumn 1947*) and since the subject is so important his arguments are given at length.

It is emphasized, however, that whether or not The Master was a vegetarian is of no real importance to our advocacy of vegetarianism. The question is purely academic. We each have the responsibility of making choices — not copying the habits of bygone days. It is a purely personal choice in thinking that a gross injustice has been done to a great soul by representing him as a slitter of animal throats, and to our mind the whole argument can be summed up in that the Biblical representation of a Divine Man is contradictory.

The Rev. Holmes-Gore's commentary may not move the orthodox priest, for it is as simple to produce contrary arguments as it is to see the absurdity of a throat-slitting Son of God. But we think he has produced sufficient evidence to convince the ordinary thinker that a literal acceptance of the Biblical text is not without its pitfalls :—

Those who try to follow the vegetarian way of life are greatly hampered by the belief that the Master — known to the world as Jesus Christ — was a meat-eater. And vegetarians are even accused of setting themselves up to be better

than He was. We must therefore examine the reasons put forward for the view that the Master did eat meat and see how these can be best shown to be false.

All the evidence put forward comes from the four Gospels. It may be briefly summarised as follows :—

1. There are nineteen references to meat in the Gospels and on more than one occasion the Master is represented as saying to the disciples, "Have ye any meat?" (John 21, 5; Luke 24, 41).

2. The Master and the disciples are supposed to have kept the Passover when they celebrated the Last Supper.

3. The Master is said to have eaten fish after His Resurrection (Luke 24, 43).

He is also represented as giving His disciples fish to eat (John 21, 9) and feeding the five thousand and four thousand on seven (or five) loaves and a few small fishes (Matt. 14, 17; 15, 36; Mark 6, 41; 8, 7; Luke 9, 13; John 6, 11).

And finally there are the two occasions on which He is said to have worked a miracle in order to help His disciples catch a huge quantity of fish (Luke 5, 6; John 21, 11).

Interpretation.

Let us take the references to "meat" first. If we examine these nineteen references we shall see that none of them implies that the Master ate flesh. Such sayings as "My meat is to do the will of Him that sent me," and "Labour not for the meat that perisheth" are clearly metaphorical, and in any case do not support meat eating.

But, even if some might seem to imply that He sanctioned flesh eating, they do not, because all the Greek words translated "meat" mean merely food or nourishment. The words are: *Broma* — food (four times); *Brosimōs* — that which may be eaten (once); *Brosis* — food or the act of eating

(four times); *Prosphagion* — anything to eat (once); *Trophe* — nourishment (six times); *Phago* — to eat (three times).

Thus He did not say, "Have ye any meat?" (John 21, 5) but "Have ye anything to eat?" And when the Gospels say that the disciples went away to buy meat (John 4, 8) it merely means food. So much for the references to meat.

The Last Supper and the Passover.

The difficulty of the Passover is far more serious. Tradition has for a long time assumed that the Last Supper was the Passover meal and this would imply that the Master and His disciples ate the Passover Lamb.

But recently scholars have come to see that the records are inconsistent, and that the only way of explaining the various references is to assume that the Last Supper was not the Passover Meal. The evidence is as follows:—

The Crucifixion took place on a Friday and the Last Supper on the Thursday evening. (The Jewish day began at 6 p.m. and therefore according to their reckoning the Last Supper and the Crucifixion were on the same day).

Now the first three Gospels state that the meal the Master ate with His disciples was the Passover Meal (Matt. 26, 17; Mark 16, 16; Luke 22, 13). St. John on the other hand, states that the Last Supper was not in the Passover, and that the Passover was on the Sabbath (John 19, 14, 31). In chapter 13, verses 1 to 4, he writes: "*Now before the feast of the Passover* Jesus knowing that His hour was come . . . riseth from supper and layeth aside His garments; and He took a towel and girded Himself." Moreover, John says, in chapter 19 (verse 15), that the Crucifixion took place on the day of the preparation of the Passover (the day before the Passover) and in verse 31 of the same chapter he says the body of the Master was not permitted to remain on the Cross because "the day of that sabbath was a high day" i.e., the Passover

was on the Sabbath, and began at 6 p.m. on Friday after the Crucifixion was over.

This is perfectly consistent with John's statement in chapter 13 (verses 1 and 2) that the Last Supper took place before the Feast of the Passover, i.e. on the Thursday evening and also with his statement that on Good Friday morning the members of the Sanhedrin refused to enter the Praetorium (or governor's residence) for fear they might defile themselves before eating the Passover (18, 28).

Thus John's account is perfectly reasonable and consistent, and flatly contradicts the claim of the first three Gospels that the Last Supper was the Passover Meal. Which are we to believe ?

If we examine the first three Gospels carefully we shall see that even they contain evidence which supports John. Thus, Matthew 26, 5, represents the priests as saying that they would not kill Jesus during the Feast "lest a tumult arise among the people," i.e., not during the Passover (as John rightly says). Yet Matthew is so inconsistent that it puts both the Last Supper and Crucifixion on the day of the Passover. Again it was not customary to hold trials and execute people on the first and holiest days of the Feast. Moreover, the Feast would not be called the Preparation as it is by Mark (15, 42) and Luke (23, 54).

Since the Passover was regarded as equivalent to the Sabbath it is unlikely that the people would carry weapons (Mark 14, 43, 47) or buy linen and spices for burial (Mark 15, 46 ; Luke 23, 56) if the Passover had already begun. Again the haste with which the Master was laid in the Tomb (Mark 15, 42-46) is consistent with the Jews' desire that His body should not be left on the Cross when the Feast had begun (i.e., Good Friday, 6 p.m.).

Another point which indicates that the Last Supper was not the Passover Meal is the absence of any mention of the

lamb. As J. A. Gleizes says, "in substituting bread and wine for flesh and blood in the divine sacrifice," the Master "announced the new alliance between man and God, a true reconciliation with all His creatures." If the Master had been a meat-eater He would have mentioned the lamb, and not Bread as the symbol of the Divine Passion in which the Lamb of God was slain for the sins of the world. And so everything indicates that the Last Supper was not the Passover, but was a fellowship meal which the Master had with His disciples.

It is significant that even such a pillar of orthodoxy as the late Rt. Rev. Charles Gore, Bishop of Oxford, says: "We will assume John is right when he corrects Mark as to the nature of the Last Supper. It was not the Paschal meal proper, but a supper observed as a farewell supper with His disciples. Nor do the accounts of the Supper suggest the ceremonial of the Passover Meal" (*A New Commentary on Holy Scripture*, Part III page 235).

Moreover, The Very Rev. F. W. Farrar, Dean of Canterbury, in his *Commentary on St. Luke in the Cambridge Bible for Schools*, says that it may be that the Last Supper "was not the actual Jewish Paschal meal, but one which was intended to supersede it by a Passover of far more divine significance."

The Eating of Fish.

And now we must examine the passages in which the Gospels represent the Master as eating fish or encouraging the eating or catching of fish.

In St. Luke 24, 41-44, we read that after His Resurrection the Master said to His disciples: "Have ye anything to eat? And they gave Him a piece of broiled fish. And He took it and did eat before them." It is perhaps significant that there is a doubt about the correct text of Luke 24, 42. The Autho-

vised Version of the Bible follows certain manuscripts which say, "And they gave Him a piece of broiled fish, and of an hnoeycomb and He took it and did eat before them."

In John 21, 5-13, we have a somewhat similar action attributed to the Master after His Resurrection. He asked the disciples, "Have ye aught to eat? And they answered Him, No." Then He told them to cast their nets on the right side of the boat, and they caught so many fish that they could not draw in the net for the multitude of them. And when they did manage to get the fish to land they found 153, and they cooked some of them and "Jesus cometh and taketh the bread, and giveth them and the fish likewise."

In the fifth chapter of Luke (verses 1-11), we have a different account of the miraculous draught of fishes, but here there is no mention of the Master or the disciples eating fish. It is significant that a number of critics have, for various reasons, doubted whether these stories refer to actual events. It is strange that the only occasion on which the Master is said to have eaten fish was after the Resurrection, and some have thought that the incidents were inserted by those who were anxious to show that He was not merely an apparition but had flesh and bones (Luke 24, 39).

It is, however, more satisfactory to take the stories in a mystical sense, as has been done by many. Indeed, John's version, which says they caught 153 fish, is difficult to understand if it is taken literally; 153 is not at all a large number of fish — the actual Greek word means "little fish" — and anyone could easily drag them to land.

Ethical and Mystical Viewpoint.

For those who believe that vegetarianism is the true way of life the ethical argument is stronger than any other. If we read in the Gospels that the Master did something unworthy of one who was perfectly compassionate we should

know the Gospels to give a false picture of Him, and so when they represent Him as addicted to the cruel practice of eating fish we know they are false in this respect.

The stories of the feeding of the five thousand and the four thousand have puzzled the scholars who have attempted to give explanations of them most of which are far from satisfactory. Nor do the scholars reject them on moral, but on *scientific* grounds.

All Biblical students are familiar with the use of Bread as a symbol of Christ's Body or the Divine Substance, and we know that in the early Church the Fish was a Mystery term. The Greek word for Fish I-CH-TH-U-S, is made up of the initial letters of the words *Iesus Christos Theou Uios Soter*, or Jesus Christ Son of God Saviour. It is found as a Christian symbol in the catacombs and was a kind of pass-word or mystery term. It is not unreasonable to suppose that the term "Fish" may have been used in the Gospels in a mystical sense.

The mystical interpretation of Scripture was quite usual in the early Church, and Origen says that "while every passage of Scripture has a spiritual meaning, many passages have no other meaning, but that there is often a spiritual meaning under a literal fiction." And Athanasius warns us that "were we to understand sacred writ according to the letter, we should fall into the most enormous blasphemies as by ascribing cruelty and falsehood to the Diety."

This is precisely what the non-mystical interpretation of the Gospels has done, for it asks us to believe that the Master, who came to preach a Gospel of love, was so inconsistent in His life that He ate the Creatures and encouraged others to do the same. To which the convinced vegetarian can only answer that if the Gospels teach such things then the sooner people stop taking them literally the better.

CHAPTER XIII

ARGUMENTS ANSWERED

Some Arguments Answered: Typical questions put to vegetarians. Report of a Brains Trust.

THERE are no sound ethical or scientific arguments in favour of flesh-eating. There are, however quite formidable points which the vegetarian is expected to explain away, and many of them are genuine difficulties for enquirers.

The following replies are not based on "Aunt Sallies" set up to knock down in a convincing way, but are the usual questions and statements which spring to mind when the vegetarian way of life is first explained. It should be remembered that vegetarianism does not stand or fall on any one apparently controversial issue, but is based on ethical principles, firmly supported by efficacy in practice; anatomical and medical evidence, together with the findings of scientific nutritional research. It also has the encouraging support of the most brilliant philosophers and thinkers down the ages.

These arguments are designed both to help the enquirer seeking a better way of living — and the vegetarian who is frequently cornered by the "awkward customer." We are of the opinion, of course, that it should be the meat-eater who justifies his slaughter of animals, but since vegetarians are still in the minority (i.e. in our particular hemisphere) we accept the onus of justification.

1. "Nature is red in tooth and claw" and we are part of Nature, so obviously meat-eating was intended.

Firstly, Tennyson's aphorism is inaccurate. The truth is that only a proportion of "nature" is carnivorous, predatory

or parasitic. The greater part is herbivorous, frugivorous or operates in symbiosis, rendering mutual benefits in the way that bees pollinate flowers. Most of "nature" is in the position of being a potential victim to the predatory type, both in the animal and human spheres.

Secondly, in any case the argument that because spiders eat flies and some birds eat worms — men and women are therefore justified in eating cows and pigs, is about as logical as arguing that because rabbits observe no marriage ceremony, the convention is hardly necessary for human beings. Patterning our lives on the elementary habits of the lower orders of creation is clearly retrogressive and ignores the accumulated benefits of human experience in wisdom, moral realization and spiritual evolution.

We do not, if we wish to be progressive, follow the behaviour of the relatively undeveloped strata of humanity — the gangsters and jungle voodoo worshippers — why go a step further and imitate tigers and snakes ? Surely our standards of behaviour should be a reflection of, and an aspiration towards perfect manhood and womanhood, not an imitation of residual forms of experimental evolution.

2. *We were given dominion over the animals — God put them in the world for us to eat.*

These statements — and many others on the same theme — spring from conditioning by orthodox Christianity, and we immediately find ourselves on very dangerous ground. People brought up on a literal interpretation of the Bible are deeply hurt when the validity of their beliefs are questioned. Nevertheless, we have to face the fact that although the basic principles of Christianity favour vegetarianism by implication, organized Christianity and parts of the Bible do not. Many denominations are bitterly opposed to vegetarianism because, if its principles were acknowledged it would mean that they have been wrong for two thousand years.

In pre-Christian days Greek philosophers had reached a high point in reasoning and intellectual freedom, but the advent of an organized priesthood with a fixed dogma had the effect of stifling further thought. In the Middle Ages heresy (thinking beyond doctrine) was a capital offence and it is only in very recent times that the mental grip of the Church has weakened to allow freedom of thought. Probably only the present generation has the opportunity to be really free. However, there are still great ecclesiastical bastions blocking the way to freedom from a literal, word for word, interpretation of the Bible — which includes the doctrine of vicarious salvation; and this has led to the idea that individual sacrifice and effort are not necessary to avert retrogression.

We can, very gently, present a choice between two different conceptions of God. One, the revengeful, tribe-smiting War Lord armed with a sword and distributing plagues and pestilence; one who might well approve of the wholesale slaughter of sentient creatures, or a God of love (not one in the image of man — as the early Hebrew version so obviously is) who could not be less of a humanitarian than some of his earthly children.

We can present two interpretations of the word “dominion” the right to conquer and exploit, which aspect seemed right as our medieval forbears set out to pillage other countries; or “dominion” as the onus of guardianship, cherishing and cultivating to perfection — doing to others as we would be done by. Sovereignty can be oppressive or beneficent.

With all respect to those who believe that the world was “saved” by the act of the Crucifixion, we can offer the fact that a bad or evil action will lead to a bad result — and we have the freedom to make good and bad choices. It is an inescapable law that we suffer or benefit from the consequences of our actions. Killing is not a constructive action. It involves the destruction of a truly wonderful form and involves fear

and pain. Since we can live perfectly happily without killing for food the matter is a personal choice ; not one we should make by reference to ancient behaviour or assuming that other creatures are in the world simply to gratify an animal appetite. The choice does not mean the abandonment of religious belief but elevating it to a higher and more God-like level.

3. *My parents and their parents before them, ate meat and led good healthy lives, being active into old age.*

If we go back two or three hundred years we shall find that our ancestors ate very little meat ; it was in fact a luxury except among the wealthy. Food consisted mostly of whole grains in various forms (farm wages were often paid in wheat and rye), and home grown vegetables and fruit without the modern embellishments of chemical fertilizers and poisonous preservatives.

Country folk, and many of us have this ancestry were, therefore, able to build good sturdy stock — a physical capital which has now been sadly overdrawn until we have reached the point when hundreds of hospitals, clinics and lunatic asylums are necessary, with thousands of doctors, surgeons, osteopaths, physiotherapists, dentists, nurses and psychiatrists. Something like £500,000,000 is spent annually on Health Services (which should properly be called Disease Services), and only about 3% die from natural causes, while the rest die while undergoing some kind of medical or surgical treatment. The old, hale, and hearty are the exceptions who have inherited extremely resilient bodies.

We think that two of the factors in this decline (bearing in mind the increased expectation of life due to improved public hygiene), are associated with increased meat-eating and food processing. Danish health statistics improved when the nation became near-vegetarian during war years. Vegetarian tribes,

like the Hunzas, do not have cancer or any other disease associated with "civilization."

If we go back far enough physiological evidence indicates that we evolved as vegetarians, since we have none of the anatomical features which characterize a carnivore. The direct answer might be that it is not how *long* we live which has any real significance, but *how* we live in relationship to other living creatures. We are brought back to the problem of the purpose of life. If it is to grow spiritually, then this cannot be done at the expense of the butchery and sacrifice of other living beings. It is barbarous and inhuman to be predatory. In the eyes of any Assessor of Souls we are as we behave, and we suggest that any goodly works are nullified if — on the other hand — we destroy and behave like un-evolved animals.

It should be borne in mind that vegetarians also live long and useful lives without involving slaughter; in fact some of the greatest reformers from Buddha to Bernard Shaw have done so. Meat is not necessary for health and longevity, so why introduce additional pain and suffering into the world by killing for food?

4. *Most of the best athletic records are held by meat-eaters and they have a much longer list of intellectual giants.*

Without arguing the relative merits of religious leaders and scientists (the vegetarian Pythagoras and Sir Isaac Newton are not bad examples), we admit that Bannister, Pirie, Chattaway, Zatopek, etc., are fine specimens of physical manhood (they might do better on a vegetarian diet) but considering the number of meat-eaters there are compared with the small number of vegetarians, we hold records in far greater proportion — in all branches of sport — walking, "peak bagging" cross country running, cycling, swimming and wrestling. Vegetarians have proved that flesh-eating and

killing are *not necessary* for the achievement of the peak of physical perfection, and we know that many athletes who do their training on a meatless regime.

5. *Meat is a stimulant, and gives immediate energy without a lot of bulk.*

Yes, we again agree, and this is one of the reasons why to-day's athletes are concerned with speed rather than endurance over very long periods — at which vegetarians excel. Some African jungle warriors go further and drink the hot blood of their slain enemies, asserting that by so doing they acquire their strength. This is possibly true, and if this kind of stimulant is necessary, meat-eaters will get a much better effect by eating freshly killed raw meat while it is still warm. By this means they will avoid a lot of putrefactory bacteria, which gets busy after rigor mortis has passed.

Apart from the moral issue, there is the grave disadvantage of stimulants that the effect wears off equally quickly and the need is felt for another stimulant or a narcotic to take the edge off the desire. The bigger the impact of a stimulant the bigger the "let-down" and "hang-over" — alcohol is a quick stimulant and leaves behind the debris of quickly discharged energy with which the body cannot always cope.

The reason why carnivorous animals have a short bowel is so that toxic debris can be rapidly expelled. Lasting energy comes from materials which give up their energy slowly (like the slow charging of an accumulator — a rapid charge expires rapidly and spoils the accumulator), and we have a relatively long bowel designed for this purpose. Carnivores secrete much more hydrochloric acid in their digestive systems than we do ; sufficient in dogs — for instance — to dissolve bones ; meat and meat products therefore tend to go through us in a dangerous bacteriological state.

It is not true that vegetarians need to eat more bulk. Raw fruit and vegetables (in salads), wholemeal bread, etc., are

richer in essential elements than meat, take more chewing than cooked foods and give a better feeling of well-being with less quantities. One slice of wholemeal bread feels better under the belt than four made with white devitalized flour. There is more pure nutrition in nuts and dairy produce than in similar amounts of meat, and the effect lasts longer.

6. *What would happen to all the animals if we did not eat them — we should be over-run. Is it not better for a pig to have a short well-fed life than no life at all?*

We are not overrun by the animals we do not eat — lions, elephants, and crocodiles, etc. ; and all meat-bearing animals are under rigid breeding control. The slow lumbering cow is a sorry echo of the agile creature it might be under natural conditions, where it would flourish in very small numbers. In domesticating, distorting sex functions like excessive milk and egg production, we are interfering with an animal's natural life cycle, and although even vegetarianism is still far from being ethically perfect in this respect, it does release the animal kingdom from a great burden of suffering.

Through vast geological periods of time we know that some forms of creature life disappeared, and if there is any truth in the theory of reincarnation it may well be that we condemn life to existence in forms unsuitable for evolving into higher expressions of growth.

Since it is unlikely that vegetarianism will become universal overnight the reduction of the cattle population will be gradual.

7. *I do not eat meat, well very little ! but I like it and it is a social custom.*

According to the latest investigations vitamin B₁₂ is a factor of great importance and a deficiency leads to anaemia. It is either obtained by eating a lot of meat (second-hand from the vegetarian cow) or from processes connected with intesti-

nal flora. A little meat prevents the natural development of vitamin B₁₂ by the competitive action of certain bacteria, which would otherwise grow on a normal vegetarian diet. So we can advise a beneficial dropping of that "only a little meat."

A little or a lot involves the death of an animal, so there is not much virtue in claiming moderation. The only reason why people eat meat is because they like it — a few weeks abstinence would rid the palate and nose of this illusion and the charnel odour from butcher's shop would be recognized for what it is — a mortuary for putrefying flesh. The fact that it is still a social custom is to be deplored — and changed as soon as possible. Let us go forward; not go backwards to the jungle.

REPORT OF A BRAINS TRUST.

The following questions were asked at a Brains Trust during the May Meetings in 1956 under the auspices of The Vegetarian Society and in conjunction with The London Vegetarian Society. The Rev. Canon Edward Carpenter was humorous and succinct as question master. The team was able to cover a wide range from the pertinent questions and consisted of — Mrs. Isabel James, B.A., proprietress of Rothay Bank Vegetarian Guest House; Mrs. E. Lyn Harris, M.A., late co-principal of St. Christopher School; Dr. B. P. Allinson and Dr. Douglas Latto, the well-known London physicians.

The following questions and answers (brief resumes given) were listened to with the keenest interest.

1. *It often happens that the mother of a family sees the desirability of vegetarianism first. What does the team think is the best way of weaning the rest of the family without causing alarm and despondency?*

Mrs. Harris : If the parents are happy about their diet the

children soon follow, but too much enthusiasm and coercion puts them off. Best to introduce such dishes as muesli and use whole-meal bread.

Mrs. James : Take the family to a vegetarian guest house or a holiday centre to meet other families — it is soon realised that vegetarians are normal people. Increase cheese and egg dishes — many will not realize that they have not been eating meat.

Dr. Latto : Let children know they are eating dead animals, this will soon cure them of liking meat. Women should cook all meat dishes badly and prepare vegetarian meals well.

Dr. Allinson : A question of strategy in which the psychological situation is important — ask people which they like eating best — cows, pigs or sheep ? Don't "ram" vegetarian food down the husband's throat.

2. Vegetarians die of diseases just the same as meat-eaters — so what ?

Dr. Latto : It is not necessary to die of disease, we should fade away. From the medical point of view it is a crime to die without a disease, and this causes an immense amount of trouble — inquests and post-mortem examinations. The vegetarian races keep healthy, while in meat-eating communities 40 per cent die of heart diseases, and in this country there are 100,000 deaths from cancer every year.

Dr. Allinson : There are other factors beside diet—all crops are poisoned with chemicals and so is the water supply. If we could get 100 per cent naturally produced food there is no doubt we should be perfectly healthy.

Mrs. Harris : Whole grains and vegetables grown with compost help to offset ill health.

Mrs. James : It should not be forgotten that the air is also polluted by factories and other fume producing mechanisms.

3. *If animals were killed really humanely, without the slightest pain, fear or anticipation of death, would not your case fall to the ground ?*

Mrs. James : The point is why shouldn't animals be allowed to enjoy their lives ? They have as much right to live as we have.

Mrs. Harris : Surely animals have a definite knowledge of what is going to happen. Animals led to the slaughter-house have an uncanny instinct that something is going to happen to them and can only be made to approach the entrance with the greatest difficulty.

Dr. Allinson : The flesh of animals killed in a state of fear is known to be more toxic — the only difference would be that meat would be slightly less harmful, but it would still be toxic. Humanitarianism does not justify killing however it is performed.

4. *Many people believe that animals were put into the world for us to eat. Does the team think they have any other purpose ?*

Dr. Latto : There is no excuse for eating animals — their flesh has to be disguised in name and by cooking. We are frugivorous and quite unsuited to eating meat. There is no humane way of killing animals and they should have their full range of life not killed in a few months. We, and the animals, are here to develop spiritually, and the way we interfere with them is criminal and upsets their natural development.

5. *After 100 years of activity in this country you have fewer than 10,000 members — do you think your propaganda is doing any good ?*

Mrs. Harris : We cannot compel people to think the same way as we do ourselves. They must find their own light. We

must have patience and it is best to set an example. Our business is not to reap the harvest but to get on with the sowing.

Mrs. James : There are very many more than 10,000 vegetarians in the country and many have adopted vegetarianism without thinking it necessary to help the movement. There has been a big change in the attitude of the public during the last 20 years, and the fact that *Good Housekeeping* has just produced a splendid vegetarian recipe book speaks for itself. We each have a great responsibility to work for the movement.

Dr. Latto : We are not downhearted — the movement is gaining momentum. The main thing is to live the life, never waver and be staunch to our principles.

Dr. Allinson : Fifty years ago we were criticized for being vegetarians, now we always hear the apology "I only eat a little meat" — our activities have thus produced a definite guilt complex among meateaters.

6. *What is the vegetarian attitude towards the Polio Vaccine now about to be used in this country ?*

Dr. Allinson : Vegetarians could not possibly have anything produced by the exploitation of animal life — vaccines and sera come from cows, horses and monkeys. The efficacy of the vaccine is, in any case, unproven, and it is not known how long the alleged immunity will last or how frequently the inoculations will have to be given — or what will arise if doses are repeated.

Dr. Latto : The vaccine is not a vegetarian product. The preparation is morally wrong and is, therefore, scientifically wrong. Keep the bowel healthy and no virus will be able to multiply in it. Avoid drugs which upset intestinal flora.

Mrs. James : On a recent television programme a mother of two children, one of which had polio, said she would not

have the other child inoculated as she would not like to risk contracting anything from the vaccine. The general public is fairly sensible on these matters.

Mrs. Harris : The leaflet on Polio Vaccine by Dr. Beddow Bayly is recommended. One school sent parents leaflets giving both sides of the question.

7. *I like the idea of vegetarianism but fruit and nuts are very expensive. Obviously it is a fad for the luxury classes and not economical for poorer people — or is it possible to live as a vegetarian on a low income ?*

Mrs. James : If you cannot afford fruit and nuts, buy lentils and cabbage. Lentils, raw vegetables and such simple fare are best for health. The question is based on a fallacy — whole-meal bread goes further than white bread and with a vegetarian diet we do not need to buy medicines — no one thinks of the cost of a packet of cigarettes.

Dr. Latto : People should give up beer and tobacco. A vegetarian diet can be cheaper. It is best to eat local vegetables and fruit in season and grow them ourselves. The more vegetarians we convert in the country the cheaper vegetarian foods will become.

Dr. Allinson : The question implies sales resistance. A family of market gardeners found they could work longer and live cheaper on a vegetarian diet.

8. *Vegetarian girls find it difficult sometimes to find a suitable vegetarian mate — what advice would the team offer about marrying a Philistine ?*

Mrs. James : I once had this problem but decided to convert a prospective husband before marriage — in this way I made quite a few vegetarians. Come to Rothay Bank and meet attractive partners (cries of “no advertising”). Remem-

ber you have more influence on men before marriage, while they are in a confused state, than afterwards.

Dr. Latto : When it comes over us we have no real choice but it is a good idea to join vegetarian social clubs.

Dr. Allinson : At the time of courtship the male is prepared to make sacrifices — convert him then.

9. *If vegetarianism is all that good why don't the Church, the Medical Profession and Health Authorities adopt it as an official policy — I think the fact that they do not speaks for itself.*

Dr. Allinson : Medical and ecclesiastical authorities are immune to humanitarian considerations — ethical movements are like a red flag to a bull.

Mrs. James : Vegetarianism goes back long before Christianity and Pythagoras. The authorities have their prestige to consider and will not admit that they have been wrong for hundreds of years. Nature Cure is recognised in Germany.

Dr. Latto : I cannot have doctors attacked — it cuts both ways — the public is just as much to blame because it will not discipline itself. It *prefers* to have three quarters of its stomach cut out so it can “get back to normal.”

Mrs. Harris : Suffering will, in the end, make for progress. Vegetarians are pioneers and doctors are still attacking symptoms instead of causes. Doctors are trained in orthodox ways.

10. *You say that “nature will adjust the balance” but if everyone turned vegetarian wouldn't the animals suffer more in a wild state — and how would you propose to control their numbers.*

Dr. Latto : We are not over-run by the animals we do not kill though the animals we try to exterminate breed faster

and this happens throughout nature in the danger of extinction for any reason.

Dr. Allinson : There is never any danger of domestic animals being a menace. We could have animal reserves. Man's interference has caused diseases among animals and plants.

Mrs. James : Not a question of animals taking up too much room — we are breeding too many and using too much land for this purpose. A meateater needs 1.6 acres and a vegetarian only .75 of an acre.

11. *Anatomy is said to indicate the food we should eat but even if we are frugivorous anatomically we are eating meat and have been doing so for ages — are we getting away with it or not ?*

Dr. Allinson : Human beings have the digestive organs of frugivorous animals and man has survived only because of his great adaptability. But digressions from a natural way of living slow down evolution. Meateating doubtless originated in the ice ages when vegetarian foods became unobtainable and the habit has persisted. Man has not adapted himself successfully but derives great benefit by going back to his natural diet. Fine physical types are found in Asia where meat consumption is as low as $2\frac{1}{2}$ lbs. per year compared with the 125 lbs. per head eaten in U.S.A., Argentine and Australia.

Dr. Latta : Man is not getting away with it. Our ancestors only ate a little meat as a luxury, we now eat big quantities and hospitals are full.

12. *How can a busy mother possibly take to vegetarianism when it is so much more trouble to prepare meals ?*

Mrs. Harris : I see a lot of young vegetarian mothers and think it is wonderful how, in a very short time, they prepare meals — which the children love. If meals are planned time

is saved. It is just as easy as putting a joint in the oven and there are no greasy ovens and pans. Children don't eat sweets between meals.

Mrs. James : Vegetarian food preparation can be as hard or as easy as we wish. Salon Culinare standard or simple fare. Think of the trouble meateaters have skinning rabbits, taking bones out of fish and the nasty job of cutting up bleeding meat. A nutritious meal can be prepared in half an hour.

Dr. Allinson : Speaking as a busy father — I prepare all my own meals and still have plenty of time for work and lecturing.

13. *Will the team consider condemning the use of the term "nut-meat" and if possible substitute a new word without reference to meat.*

Mrs. James : "Meat" only means food — it is only in our minds from long association that we refer it to flesh. "Mock" is not a good word. Why not just call the savouries "nut roll" or "roast."

Dr. Allinson : Let's forbid the meateaters to use any term but "flesh."

Dr. Latta : The meateaters camouflage more than the vegetarian. Instead of using French terms they should be made to call their dishes "dead lamb" or "from a diseased goose" — they would soon become vegetarians.

14. *Would your educational member of the team consider that vegetarianism has any scholastic benefit on children? Are they brighter or better behaved?*

Mrs. Harris : Vegetarianism does make children brighter—rather like young animals, well fed full of life and keener. Doctors visiting St. Christopher School always ask how the children are kept so healthy. Vegetarianism is conducive to clear thinking — remember Pythagoras and Bernard Shaw.

APPENDICES

ATHLETIC ACHIEVEMENTS

VEGETARIAN athletes hold records and have achieved distinction in all kinds of athletics out of all proportion to their small numbers. They have been particularly successful where stamina and strength are necessary.

Many have taken championships and broken records when well past middle age. At one time the Vegetarian Cycling and Athletic Club held as many as 40% of the national road records. Such achievements have exploded for all time the idea that flesh foods are necessary for physical fitness.

Running.

E. R. Voigt	5 miles Olympic Championship (1908) 4 miles English Championship (1908 & 1909) 1 mile Open Championship (1910).
W. Kolehmainen	Professional Marathon, 26 miles 385 yds. (1912) in World Record Time 2 hrs. 39.1/5 scs. Holder of World Records for 25 and 26 miles.
H. Kolehmainen	Olympic Marathon (1920) in World Amateur Record Time. Holder of World Records for 5,000, 20,000 and 25,000 metres. 4 miles English Championship (1911) Olympic 8,000 metres Cross Country (1912).
El Ouafi	Olympic Marathon (1928)
Paavo Nurmi	Olympic 10,000 metres and holder of many world records.
F. A. Knott	Broke Belgian 5,000 metres Record (1908).

A. A. Robertson Peak bagging record in Snowdonia (1952) lowering the record by 84 mins. (7 hrs. 24 mins.).

Eustace Thomas At the age of 51 took the Lake District record in 1920.

Walking.

George Allen Land's End to John o' Groats record averaging 60 miles per day (unbeaten since 1908).

S. Norwood (At age of 66) walked 100 miles in a 24 hour open path event.

G. R. J. Withers London Railways 16 miles Championship held three years.

Tennis.

Eustace Miles Won the English Championship 10 times. World Amateur Champion at tennis and racquets and in 1900 won the American titles.

Hon. Neville
Lytton

English Championships in 1911 and 1913.

Peter Freeman Open Welsh Championship 1920, Welsh local Championship in 1920, 1921 and 1922. He also, with Sweet-Escott, defeated Manuel Alonso (World Champion) and S. Flaquer.

Boxing.

Freddy Welsh World's Light-Weight Championship (not strictly vegetarian when not in training).

Trevor King Close to Australian Featherweight title and extremely well developed.

Wrestling.

- S. V. Bacon Famous wrestler in addition to winning the Olympic Games Middleweight Championship in 1911, won 15 British National Championships, Lightweight, Welterweight, Middleweight and Heavyweight (an almost incredible performance). Four of the British won in 1924 were in his *fortieth* year and he was one of five vegetarian brothers who won wrestling championships, national and international too numerous to list.

Weight Lifting

- W. Harwood For many years Heavy Weight Lifting Champion of the North of England. Weighing only 168 lbs. himself, he was one of the few Englishmen who have lifted over 300 lbs. (1912).

Swimming.

- Kenneth Wilson Yorkshire One Mile Champion (1920) at the age of 16. 500 yards Champion of Bradford. 100 yard Junior Champion of Yorkshire (1919) in record time.
- Murray Rose Young Australian 14 years old in 1953 hailed "as the best all rounder Australia has ever produced." Never beaten in school or State age championships. Won two Gold Medals at 1956 Olympic Games—400 metres (Olympic Record), and 1500 metres free style.
- Bill Pickering Broke Channel Swim record in 1955 and plans at the time of writing to be the first to swim both ways non-stop.

Cycling.

Mr. Henry Light, who was Captain for 20 years of the Vegetarian Cycling and Athletic Club, made the following selection from hundreds of cycling achievements (in *World Records & Championships by Vegetarian Athletes* published by The Vegetarian Society in 1921).

F. H. Grubb broke the following unpaced out and home World's Road Records : 50 miles in 2 hrs. 17 mins. 38 secs. ; 100 miles in 4 hrs. 43 mins. 33 secs. ; and $220\frac{1}{2}$ miles in 12 hours. He also holds the English Unpaced Path Record for 1 hour, of 24 miles 1546 yards ; and the London to Brighton and Back record of $104\frac{3}{4}$ miles in 5 hrs. 9 mins. 41 secs. — the most prized and hottest contested road record in the kingdom.

G. A. Olley won Tandem-paced Path Records from 6 hrs. to 12 hrs. (154 to 277 miles). Also the 1 mile and the 4 mile Unpaced Path Records (standing start) in 2 mins. $7\frac{4}{5}$ secs., and 1 min. $34\frac{1}{5}$ secs. respectively ; and was England's Representative at the World's Championships at Copenhagen.

C. F. Davey in 1919 won the Bath Road Club's 100 miles Open Race and the Anerley Club's 12 hours Open Race against England's best. Also holds the London to Worthing and Back Record and has ridden 50 miles and 100 miles unpaced on out and home road courses in 2 hrs. 20 mins. 7 secs., and 4 hrs. 52 mins. 35 secs. respectively. Is also the Lincolnshire Road Champion and Record Holder for 25, 50 and 100 miles, and for 12 hours.

In the Anerley Club's 12 hours Open Race in 1911 but three vegetarians competed against England's best, and finished first, second and third—the first two breaking record (Grubb, world's record ; Davey, Southern Road Record).

Out of 12 riders chosen to represent England in the 1912 Olympic Road Race, of nearly 200 miles around Lake Malar, in Sweden, three were vegetarians (a remarkably large per-

centage) and supplied the first Englishman home, who was morally first of all nations, though by pure mischance placed second.

We are indebted to Mr. Cyril Oliver, President of the V. C. and A. C. for the following information :—

The National road records (i.e. the best rides on specific courses or over specific distances) are very hotly contested, and the Club has broken more of these national records *than any other Club*. It has broken a total of 55 records, the first being in 1895.

The Land's End to John o' Groats and the 1,000 miles still stand after a number of attempts have been made by non-vegetarians over the past 19 years to break them, S. H. Ferris having captured them for the vegetarians in 1937.

The number of local records captured by the Club is the highest of any Club, and some of these still stand in our name.

There is a national competition run annually for the Best All-rounder, i.e., for the rider putting up the best average during the year at 50 miles, 100 miles and 12 hours. The V. C. and A.C. has the highest performance in this competition of all the Clubs (of which there are many thousands), for it has had a representative in the first 12 ever since the competition was inaugurated in 1930. It has also won the team race several times. No other Club has comparable figures.

D. J. Keeler continues to win a number of road events open to everybody each year. At the moment he is going to give up the shorter distances and is starting to concentrate on training for the longer distance events.

The V.C. and A.C. is of course secondly only to The Vegetarian Society in longevity, having started in 1897, and having been active — without any break — since that time. It has always had a member or members of championship status, i.e. somebody outstanding among his fellow athletes.

British Medical and Scientific Opinions.

A paper given by Ronald Lightowler, Secretary, London Vegetarian Society, at the 1955 I.V.U. Congress in Paris :—

In the few minutes allotted for this talk, it is really not possible to do more than give a list of the names of learned individuals — doctors and scientists — who have, over very many years, written and spoken favourably of the non-flesh diet. Even such a list must needs be very much abbreviated, but it will perhaps serve to indicate how the present more favourable attitude towards vegetarianism has come about.

Britain is a very conservative country so far as the adoption of new or unusual habits and customs is concerned. The British are not given to enthusiasms for cults which are strange to the majority. When, however, a new idea is finally accepted, it usually means that it has come to stay and it can be said now that Vegetarianism is in the process of *being accepted*. The phase of antagonistic opposition has passed and those who are not vegetarian are now apologetic that they “eat very little meat.”

There are two excellent booklets which quote names and authoritative statements made by responsible and learned individuals in both the medical and scientific fields, and those of you who wish to follow up this line of thought would be well advised to procure copies of them. They are *On Behalf of the Creatures* by Rev. J. Todd Ferrier, founder of the Order of the Cross, and published by the Order of the Cross at 2/2d., and *Vegetarianism* published by The Vegetarian Society at 6d.

These quotations and names cover well over a century of thought and learned opinion on the subject of the non-flesh diet from both angles.

“Animal diet is not essential to man.”

Lord Playfair, M.D.

"It is a vulgar error to regard meat in any form as necessary to life."

"....It must be admitted as a fact beyond all question that some persons are stronger and more healthy who live on that (vegetarian) food. I know how much of the prevailing meat diet is not merely a wasteful extravagance but a source of serious evil to the consumer."

"I have been compelled by facts to accept the conclusion that more physical evil accrues to man from erroneous habits of diet than from even alcoholic drink."

Sir Henry Thompson, M.D., F.L.C.S.,
Food and Feeding.

"Comparative anatomy and physiology indicate fresh fruits and vegetables as the main food of man."

Sydney N. Whitaker, M.D., M.R.C.S., L.R.C.P.
in *Man's Natural Food: An Enquiry.*

"It (flesh food) is material which of malice aforethought has sedulously been rendered toxic during the animal's lifetime. In the first place his endocrine defences are interfered with by castration he is then immobilised and over-fed, with a view to causing him to develop fatty degeneration of all his organs; and it is when this ugly process is complete that he is regarded as fit for human consumption."

Dr. Leonard Williams in the *Practitioner.*

"Chemistry is no more antagonistic to vegetarianism than is biology. Flesh-food is certainly not necessary to supply the nitrogenous products required for the repair of tissue. Therefore a well-selected diet from the vegetable kingdom is perfectly fitted from a chemical point of view, for the nutrition of man."

L. J. Sykes, M.D., B.Sc.

"Flesh foods find no place in this regimen (Dr. Gold's treatment of diabetes) for the ingestion of butcher-meat

increases the toxaemic condition underlying the diabetic state and reduces the sugar tolerance. On the other hand, the non-flesh, non-stimulating and especially unfired vegetarian diet promotes and increases sugar tolerance."

Andrew Gold, L.R.C.P.E.

Diabetes : Its Cause and Treatment.

"That it is easily possible to sustain life on the products of the vegetable kingdom needs no demonstration for physiologists, even if a majority of the human race were not constantly engaged in demonstrating it, and my researches show not only that it is possible, but that it is infinitely preferable in every way."

Alexander Haig, M.D., F.R.C.P.

"No physiologist would dispute with those who maintain that men ought to have a vegetable diet."

Dr. Spenser Thompson.

"It must be honestly admitted that, weight by weight, vegetable substances, when they are carefully selected, possess the most striking advantages over animal food in nutritive value . . . I should like to see the vegetarian and fruit-living plan brought into general use and I believe it will be."

Sir Benjamin W. Richardson, M.D., F.R.S.

"A diet consisting of any staple grain with milk, milk products and green leafy vegetables contains not only the right kind and amount of protein but everything else the body needs for health, strength and well-being."

Sir Robert McCarrison.

"The functioning of the mind is affected by food. There are certain kinds of food that supply the correct material for the activating of the mental process. Generally speaking, the mind works best on a mild diet, without meat, and containing fresh vitamins and inorganic constituents rich in calcium

phosphates. It requires an immense amount of nourishment, highly specialised and containing substances secreted by the endocrine organs of the body, which must, therefore, be in a generally healthy condition."

E. R. Rost, O.B.E., M.R.C.S., L.R.C.P.,
in *The Nature of Consciousness*.

"It seems clear from the work of the past ten or fifteen years that the mutually supplementary effect of the proteins from cereals, roots, and leafy vegetables is such as to provide an excellent amino acid-blend for tissue construction and maintenance. Of course, we should have realised this quite clearly from the records of vegetarian peoples, which are quite convincing in this respect."

Sir Jack C. Drummond (late Prof. of
Biochemistry, London University).

The Harben Lecture, 1942.

In more recent days in Britain we have received added confirmation of the soundness of our way of living from one who became a well-known public figure as the first "Radio Doctor." This is Dr. Charles Hill, who later became Minister of Food, and it was during the course of his lecture entitled *Food Fads and Fancies* — the first Armstrong Memorial Lecture — which he delivered before the Royal Society of Arts in London on December 12th, 1951, that he made the statement :—

"There is no objection whatever to lacto-vegetarian diet, which is that adopted by most vegetarians There are many alternative sources of first-class protein and the meatless diet can be as good as any other."

Since then other medical men speaking over the Radio have made similar statements.

So far the references have all been to medical and scientific men but my record would be sadly lacking if I made no refer-

ence to the great work and testimony for vegetarianism and against vivisection made by that brilliant and attractive lady, Dr. Anna Kingsford. In the story of her outstanding achievement back in 1880, when the medical schools in Britain were closed to women students, it was to Paris that she came and it was at the Paris Faculty that she studied and passed her Doctorat Examens and here she wrote her famous thesis *L'Alimentation Vegetale de l' Homme*, by means of which she won her diploma. (Later published in England as *The Perfect Way in Diet*.)

This remarkable woman refused throughout her days as a students here in Paris to permit any experiment on a living animal to take place in classes she attended. Although the emphasis of her later work was more specifically spiritual, she never wavered from her deep conviction concerning the importance of vegetarianism or failed to bring all her scientific knowledge to bear on arguments in its favour. Her conviction is expressed the following words taken from her own writings:—

“I ardently believe that the vegetarian movement is the bottom and basis of all other movements towards Purity, Freedom, Justice and Happiness.”
and again—

“I consider the vegetarian movement to be the most important movement of our age. I believe this because I see in it the beginning of true civilization.”

Some Famous Vegetarians.

Buddha, Zoroaster, Asoka, Pythagoras, Plotinus, Plutarch, Appollonius, Plato, Socrates, Diogenes, Ovid, Origen, Clement, Chrysostom, Swedenborg, Tolstoy, Gleizes, Rousseau, Michelet, Voltaire, Milton, Pope, Shelley, Wesley, Newton, Booth, Wagner, Kellogg, Shaw, Nina, Duchess of Hamilton,

Pitman, Tagore, Annie Besant, Anna Kingsford, Maitland, Todd Ferrier, Rukmini Devi, H'anish, Salt, Szekely, Scholes, Robertson Scott, Annette Mills.

Veganism.

A vegan is one whose food consists of nuts, grains, fruit and vegetables to the entire exclusion of all animal products (e.g. dairy produce, eggs, honey). The Vegan Society (38 Stane Way, Ewell, Surrey) was formed in 1944 following a year of argument in The Vegetarian Society's official magazine and this Society's refusal to have an active non-dairy group within its organisation. In 1950 The Vegan Society defined its aim — "the Society shall seek to end the use of animals by man for food, commodities, work, hunting, vivisection and all other uses involving exploitation of animal life by man." The vegan argument is that we have no right to kill, or exploit animal sex functions (e.g. for eggs or milk) and that the use of milk involves the slaughter of bull calves. Their principles are also applied to clothing and the Society publishes a Vegan Trade List giving household commodities, clothing, foods, sweets, etc. which do not include animal substances. The movement is entirely ethical and is a recognition that all living creatures have the basic right to live without human interference. British, Dutch and American vegans have been closely studied (Wokes, Badenoch and Sinclair in *The American Journal of Clinical Nutrition*; Voeding, Holland; *World Forum* Eng., 1955; at Leyden, Drs. Donath, Fischer, Neulen-van Eysbergen & de Wijn, 1953; in America Hardinge & Stare, 1954).

B. B. C. Broadcast.

On the 22nd March the author had the opportunity of making a short statement of vegetarian principles in the "Challenge" series, in which minority movements were given an airing.

Dr. Dennis Chapman, Lecturer in Social Science at Liverpool University was in the chair. The opponents were Professor Alan Gemmell, of the Department of Biology, North Staff University College; and the Rev. Wilfred Garlick, the well-known "Radio Parson" and Vicar of St. George's, Stockport.

Although the discussion was carefully kept away from the subject of vegetarianism, which has no real arguments against it, the opponents agreed that it would be better if our proteins were obtained from the vegetable kingdom and that something should be done about the "beastliness of the slaughterhouse."

We were grateful to the B.B.C. for this opportunity to make a concise statement of the ethical and scientific principles of vegetarianism to millions of listeners.

The Statement made :—

Let us be quite clear what a Vegetarian is. It is someone who abstains from the use as food of flesh, fish and fowl, with or without the addition of eggs and dairy produce. The term was only coined in 1842, but the practice of vegetarianism is thousands of years old, particularly, of course in Eastern countries. The pioneers of vegetarianism renounced flesh-eating for ethical reasons, and the knowledge of scientific nutrition, vitamins, and so on, which came later, have proved that what is right in principle is right in practice.

Vegetarianism is based on the idea that all life springs from the same source, the same Divine Source, if you like, and is therefore a unity. That life is a possession we have no right to take unnecessarily. That it is better to cherish life rather than to destroy it for selfish purposes. It involves a moral choice and, if we think we are here to evolve (physically, mentally and spiritually), we cannot reserve this purpose for the human animal only, and we are a kind of animal—a

mammal to be exact. Our physiology indicates that we evolved for millions of years as vegetarians, because the carnivores and omnivores — the flesh eaters — have distinct anatomical differences. For instance, they have a very short bowel — for the rapid expulsion of highly toxic substances. They do not sweat through the skin, their teeth and claws are different, and they also lap water, like a cat. On the other hand, herbivores and frugivores have long bowels, sweat through the skin, their jaws can move from side to side and their teeth are specially adapted for chewing.

Now we agree that a certain amount of protein is necessary to sustain human life. We can obtain some of this second-hand from the body of a dead animal. Beef, for instance, has about 15% protein, but it also has 56% of extremely dirty water, with the toxic wastes from the animal's bloodstream, and bacteria — not only from putrefaction, but also from diseased tissue. On the other hand, we can obtain protein, without these disadvantages, from nuts, seed, pulses, grains, fruit and vegetables, and, if we wish, from dairy produce — from our vegetarian point of view this isn't ideal, but it is a bridge-head away from ages of flesh-eating.

The vegetable kingdom is the source of all the food elements — minerals, carbohydrates, fats and vitamins necessary for health, and human beings can develop all their powers from a vegetarian diet. Some of the world's finest thinkers have lived without flesh foods — think of Buddha, Pythagoras, Plato, Plutarch ; many early Christian writers like Clement of Alexandria ; such great intellects as Voltaire, Milton, Tolstoy, Sir Isaac Newton, Gandhi, and George Bernard Shaw. All of them have demonstrated that flesh foods are not necessary for advanced thinking processes. Vegetarian athletes, too, from Greek Marathon runners to modern times hold many records, particularly where stamina is required. They have shown that killing for food is not

necessary for physical fitness. Please note the emphasis — it is not necessary to slaughter other living creatures to live, think, and be healthy.

After all, health depends almost entirely on what we eat. Surely our eating habits need considering if £ 500,000,000 have to be spent annually on Health Services. Just compare this with the Hunzas in India. They are a vegetarian people and never have cancer or other diseases. During the war years Denmark became almost vegetarian and her health statistics were never better.

Two final points, both moral ones. There is about one acre per person in the world for food production — a meat eater needs more than twice that of a vegetarian to support him (nearly two acres) and so takes more than his fair share.

Then there is the beastliness of the slaughterhouse. However humane killing is supposed to be, the animals suffer pain and fear; their lives are terminated far short of their natural span; and the act of killing cannot but breed callousness and irreverence for life. Butchery is not necessary for us to live a good life.

Alkaline Balance.

The bloodstream in health is slightly alkaline, so it follows that an acid forming diet will upset this balance. Great benefit is felt if this simple factor is considered. Some fruits and vegetables may be acid, but in the process of digestion become alkaline and are known as "alkaline forming." As a rough guide it is wise to see that more than half of our daily food belongs to the alkaline group — even two-thirds.

The chief *acid forming* culprits are :—Wheat flour, and all confections made with them — pastry, cakes, buns, and steamed puddings, custards from devitalised cornflour, etc. Nearly all flesh foods. Eggs, being of high protein value. Fish like haddock. Oatmeal and by-products. Rice.

The best alkaline forming foods are :—Apples, almonds, apricots, bananas, blackcurrants and other currants, dates, figs, grapes, lemons, olives, oranges, pears, prunes, raisins and tomatoes. Beetroots, cabbages, carragreen and agar agar, carrots, cauliflower, celery, endive, lettuce, onions, parsnips, fresh peas, potatoes, radishes, spinach and turnips.

Comparative Food Values.

The following figures are taken with the kind permission of the Controller of H.M.S.O., from *Nutritive Values of Wartime Foods* by the Medical Research Council. It should be borne in mind that different authorities give widely differing analyses, but in taking all our figures from one reliable source we have *relative values*. The figures are interesting in that they show that a mixed vegetarian diet will provide adequate supplies of all nutritive essentials ; and give an indication of nutrients desired or to be avoided in specific diets. 100 grammes represents, roughly, 3½ ounces and being parts of a hundred grammes, the water, protein, fat and carbohydrate figures represent percentages. The vitamin A column represents “potency” and where “c” appears with the figure it means that we obtain it through its precursor, Carotene.

Food

CEREALS

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C
						mg.	mg.	i.u.	ug.	mg.
Flour 100% extr.	13	9.1	2.3	68.1	330	36	—	294	—
Flour 70% extr.	13	8.1	1.0	76.2	346	19	—	87	—
Oatmeal	9	12.1	8.7	65.5	389	55	—	450	—
Rye wholemeal	12	8.3	2.8	68.3	332	57	—	—	—
Wheat germ	8	32.0	7.7	37.8	349	58	—	2100	—
Rice, milled	12	6.0	1.0	78.1	346	4	—	80	—

MEAT

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C
						mg.	mg.	i.u.	ug.	mg.
Sirloin	59	16.0	23.0	—	271	10	50	80	—
Steak	56	14.0	29.0	—	317	10	50	80	—
Steak, stewing	65	17.0	16.0	—	212	10	50	80	—
Veal (Carcass)	74	18.0	6.0	—	126	10	50	80	—
Mutton leg	64	16.0	19.0	—	235	10	50	160	—
Pork Chops	40	11.0	48.0	—	476	10	—	720	—
Bacon Streaky	33	9.0	55.0	—	531	10	—	300	—
Beef Corned	53	25.0	16.0	—	244	10	—	—	—
Pork Sausage	43	9.0	43.0	1.0	427	10	—	450	—

FISH

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C
						mg.	mg.	i.u.	ug.	mg.
Cod	81	16.0	0.5	—	69	25	—	60	—
Sole	79	16.0	2.0	—	82	25	—	60	—
Salmon	67	17.0	14.0	—	194	25	—	60	—

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C
						mg.	mg.	i.u.	ug.	mg.
Crab	73	20.0	4.0	—	45	1.0	—	—	—
Kipper	62	19.0	16.0	—	120	2.0	180	10	—
DAIRY PRODUCTS										
Milk	88	3.3	3.6	4.4	63	0.1	140	45	1.5
Condensed Milk (unsweetened)	68	8.5	9.2	11.5	163	0.2	370	65	2.0
Butter (Empire)	15	0.5	82.5	—	745	0.1	4000	—	—
Margarine (fortified)	14	—	85.3	—	768	0.3	2000	—	—
Eggs, fresh	74	12.5	11.5	0.9	157	3.0	1000	150	—
Eggs, dried	5	45.8	42.0	3.2	574	11.0	3000	400	—
FRUITS										
Apples, cooking	86	0.3	—	8.6	36	0.3	40c	45	5
Apples, eating	85	0.3	—	10.5	43	0.3	40c	45	5
Apricots	87	0.6	—	6.0	26	0.4	750c	30	10
Bananas	71	1.1	—	17.3	74	0.4	80c	50	10
Bilberries	86	0.5	—	5.5	24	0.5	150c	—	15
Blackberries	82	1.3	—	5.8	28	0.9	300c	20	20
Cherries	82	0.6	—	10.7	45	0.4	200c	50	5
Cranberries	87	0.4	—	3.2	14	1.1	—	—	—
Currants, black	77	0.9	—	5.9	27	1.3	90c	45	200
Currants, red	83	1.1	—	4.0	20	1.2	25c	45	45
Damsons	78	0.5	—	8.6	36	0.4	—	50	5

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C.
						mg.	mg.	i.u.	ug.	mg.
Gooseberries, cooking	1.1	—	3.1	17	28	0.3	200c	45	40
Gooseberries, eating	0.6	—	8.3	36	19	0.6	200c	45	40
Grapes, white	0.6	—	14.5	60	19	0.3	50c	30	5
Grapefruit	0.6	—	4.8	22	17	0.3	20c	70	40
Greengages	0.8	—	10.6	46	17	0.4	400c	45	5
Lemon juice	0.3	—	1.4	7	8	0.1	—	30	50
Loganberries	1.1	—	3.1	17	35	1.4	70c	20	30
Oranges	0.8	—	7.7	34	41	0.3	300c	75	55
Peaches	0.6	—	8.2	35	5	0.4	750c	20	10
Pears	0.2	—	9.4	38	7	0.2	10c	20	3
Pineapples	0.5	—	10.4	44	12	0.4	100c	75	20
Plums, red and yellow	0.6	—	5.6	25	14	0.3	400c	45	3
Plums, Victoria	0.6	—	8.6	37	11	0.4	400c	45	3
Raspberries	0.9	—	5.0	24	41	1.2	70c	20	30
Rhubarb	0.6	—	0.9	6	103	0.4	—	20	10
Strawberries	0.6	—	5.6	25	22	0.7	15c	20	60
Tomatoes	0.9	—	2.5	14	13	0.4	3000c	60	25
DRIED FRUIT										
Apples	2.0	—	44.1	184	30	2.0	100c	—	—
Apricots	4.8	—	39.1	176	92	4.1	5000c	—	—
Currants	1.7	—	56.8	234	95	1.8	50c	—	—
Dates	2.0	—	57.5	238	68	1.6	100c	—	14

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C
						mg.	mg.	i.u.	ug.	mg.
Figs	17	3.6	—	47.6	205	284	90c	—	—
Prunes	23	2.4	—	36.3	155	38	2500c	—	17
Raisins	22	1.1	—	58.0	236	61	50c	—	8
Sultanas	18	1.7	—	58.2	240	52	50c	—	—

NUTS

Almonds	....	5	20.5	53.5	3.9	579	247	—	240	—
Barcelonas	....	6	12.9	64.0	4.7	646	170	—	—	—
Brazil	....	8	13.8	61.5	3.7	624	176	—	—	—
Chestnut	....	52	2.3	2.7	32.9	165	46	—	—	—
Cobnuts	....	41	9.0	36.0	6.1	384	44	—	—	—
Coconut	....	42	3.8	36.0	3.3	352	13	—	—	—
Peanuts	....	4	28.1	49.0	7.7	584	61	—	900	—
Peanuts, roasted	....	4	28.1	49.0	7.7	584	61	—	240	—
Walnuts	....	23	12.5	51.5	4.5	532	61	—	300	—

FRESH VEGETABLES

Asparagus	....	94	2.0	—	2.4	18	28	700c	180	63
Beans, broad	....	77	7.2	0.5	9.5	71	30	—	—	30
Beans, French	....	92	1.1	—	2.6	15	33	600c	75	10
Beans, runner	....	92	1.1	—	2.6	15	33	600c	75	20
Beetroot	....	87	1.8	—	8.1	40	32	—	35	10
Brussels	....	85	4.4	—	4.0	34	27	400c	120	100

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C
						mg.	mg.	i.u.	ug.	mg.
Cabbage	1.5	—	5.0	26	65	1.0	900c	75	70
Carrots, July....	0.7	—	4.9	22	48	0.6	10000c	60	10
Carrots, September	0.7	—	4.9	22	48	0.6	20000c	60	10
Cauliflower	2.4	—	3.0	22	—	0.9	—	100	70
Celery	0.9	—	1.2	8	52	0.6	—	30	5
Cucumber	0.6	—	1.6	9	23	0.3	—	45	10
Endive	1.8	—	0.9	11	44	2.8	—	60	20
Horseradish	4.5	—	9.9	58	119	2.0	—	—	130
Kale	3.9	—	4.5	34	200	2.5	8000c	120	130
Leeks	2.5	—	3.9	26	51	1.3	700c	100	20
Lettuce	1.1	—	1.6	11	26	0.7	4000c	75	15
Marrow	0.5	—	3.0	14	—	—	30c	45	5
Mushrooms	1.8	—	—	7	3	1.0	—	90	—
Onion, bulb	0.9	—	4.7	22	31	0.3	—	30	10
Onion, spring	0.9	—	7.7	34	135	1.2	700c	20	20
Parsley	5.2	—	—	21	325	8.0	13000c	120	150
Parsnips	1.7	—	10.2	48	55	0.6	200c	120	10
Peas, green	5.8	—	9.5	61	15	1.9	500c	420	30
Potatoes	2.0	—	16.2	73	8	0.7	—	120	30
Chips	3.8	9.0	33.6	231	14	1.4	—	—	30
Radishes	1.0	—	2.5	14	44	1.9	—	60	30
Spinach	2.7	—	2.5	21	—	—	13000c	100	65

Food	Water	Protein	Fat	Carbo.	Calories	Cal. mg.	Iron mg.	Vit A. i.u.	B ug.	C mg.
Swedes	1.1	—	3.9	20	56	0.4	—	35	40
Turnips	0.8	—	3.4	17	59	0.4	—	35	25
Turnip tops	2.5	—	3.5	24	—	—	10000c	120	100
Watercress	2.9	—	0.6	14	222	1.6	5000c	120	60
PULSES										
Haricot	21.4	—	41.0	250	180	6.7	—	450	—
Lentils	23.8	—	47.9	287	39	7.6	50c	450	—
Peas, split	22.1	—	50.9	292	33	5.4	200c	450	—
Peas, dried	24.5	—	50.0	298	61	4.7	200c	450	—
Soya Bean	40.4	23.5	13.3	426	218	6.9	—	660	—
SUGARS										
Honey	0.4	—	68.8	277	5	0.4	—	—	—
Glucose (liq.)	—	—	78.7	315	14	—	—	—	—
Sugar	—	—	94.9	380	1	—	—	—	—
Treacle, black	1.2	—	60.5	247	495	9.2	—	—	—
Treacle, light	0.3	—	71.1	286	26	1.4	—	—	—
JAMS										
Blackcurrant	0.2	—	62.1	249	12	—	20c	2	20
Gooseberry	0.2	—	62.1	249	12	—	20c	2	5
Blackberry	0.2	—	62.1	249	12	—	20c	2	3

Food	Water	Protein	Fat	Carbo.	Calories	Cal.	Iron	Vit A.	B	C
						mg.	mg.	i.u.	ug.	mg.
Strawberry	29	—	62.1	249	12	—	20c	2	5
Raspberry	29	—	62.1	249	12	—	20c	2	3
Marmalade	29	—	62.1	249	12	—	—	2	7
Lemon curd	35	3.0	56.0	255	5	—	45	—	—
CONCENTRATES										
Blackcurrant puree	56	—	36.0	146	30	2.0	—	—	65
Blackcurrant syrup	42	—	46.0	184	20	2.0	—	—	55
Orange juice	37	—	50.0	200	—	—	—	—	160
Rose Hip	37	—	50.0	202	—	—	—	—	150
Yeast food	8	2.4	3.0	206	127	20.0	—	2000	—

And 8

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YOUNG MEN'S INDIA

The aim of the Young Men's
maintain a Young Men's club with
library, reading room, recreation
quarters mainly for students; to c
all classes and creeds under a c
may recognize their common inter
them to have lectures, discussion
train and develop their bodies
strong and healthy men.